

**PERCEPTION AND REPRESENTATION
IN LEIBNIZ**

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Submitted to the Graduate Faculty of
the Department of Philosophy in partial fulfillment
of the requirements for the degree of

Doctor of Philosophy

University of Pittsburgh

2006

UNIVERSITY OF PITTSBURGH
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Though Leibniz's views about perception and representation go to the heart of his philosophy, they have received surprisingly little attention over the years and in many ways continue to be poorly understood. I aim to redress these shortcomings. The body of the work begins with an exploration of Leibniz's proposed analysis of representation (Chapter 2). Here I argue that on this analysis representation consists in a kind of structural correspondence—roughly an isomorphism—between representation and thing represented. Special attention is given to the application of this analysis to the challenging cases of *linguistic* and *mental* representation. The next two chapters concern what I take to be the central issue of the work: the nature of distinct perception. I explain the multifarious ways in which this concept figures into Leibniz's system, and argue that the three most prominent accounts of distinct perception proposed in recent decades fall short of what we should expect from an adequate theory (Chapter 3). I then propose and develop an alternative theory, which I call the *explicit content account* (Chapter 4). It not only enjoys significant textual support, I contend, but sorts well with and sheds considerable light on the various uses to which Leibniz puts the concept of distinct perception. Finally, I argue that the explicit content account of *perceptual* distinctness also provides us with the correct account of the sense in which concepts (or ideas) are distinct, that is, with the correct account of *conceptual* distinctness (Chapter 5). In doing so I set myself against the received view that concepts are not distinct (or confused) in the same sense as perceptions. Taken together, these points paint a simpler, more comprehensive, and more enlightening picture of the Leibnizian mind than those suggested by previous work.

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PREFACE

I began doctoral studies at the University of Pittsburgh with only a casual interest in the great German philosopher Gottfried Wilhelm Leibniz (1646–1716). During the course of Nicholas Rescher’s Leibniz seminar in the Fall of 2001, however, my interest in the philosopher blossomed. Following that term, Professor Rescher was kind enough to supervise directed studies with me over the next three semesters, during which time I stumbled upon the topic of this dissertation. Throughout both this formative period and the following two years during which time the dissertation took shape and was written, Professor Rescher was an unrelenting source of encouragement, sound direction, and timely feedback. For all that, and for introducing me to the wonders of the Leibnizian philosophy, I wish to thank him. I am also deeply grateful to the other members of my dissertation committee. Bob Brandon, who served as second reader, provided both encouragement and penetrating feedback. But Bob’s most significant contribution to the project came through his important essay “Leibniz on Degrees of Perception,” which together with Margaret Wilson’s writings, gave my project direction. I would also like to thank Stephen Engstrom, who read a draft of the dissertation and provided detailed and insightful feedback. Finally, thanks to Ted McGuire for his support of this project.

Outside of my committee, there are a number of individuals who deserve recognition. I am deeply grateful to Mark Kulstad for his friendship, for encouraging me to pursue my interest in Leibniz scholarship, for taking an interest in my work, for valuable feedback both in writing and in conversation, for introducing my dissertation to his early modern reading group in Houston, and for other things too numerous to list. Among my colleagues in the graduate program here at Pitt, Joshua Stuchlik and John Morrison (now at NYU) deserve thanks for reading at least parts of the dissertation, asking penetrating questions,

and offering helpful comments. I also benefitted from a number of highly stimulating conversations with Sasha Newton on the subjects of perception and representation in Leibniz, as well as in Descartes and Kant. Karsten Worm of InfoSoftWare deserves special thanks for making available his *Leibniz im Kontext*, a CD-ROM containing many of the most significant philosophical writings of Leibniz in a searchable format. This remarkable resource proved a tremendously valuable research tool, one that allowed me to discover all manner of texts related to my research that might otherwise have gone undiscovered. Finally, and most importantly, I would like to thank my wonderful wife Melissa, who supported me financially, emotionally, and psychologically, not only through the writing of this dissertation, but through the entirety of my now ten-year old pursuit of a Ph.D. in philosophy. She has encouraged me at every point, and lovingly made sacrifices time and again to allow me to achieve this goal. For that, and much more, I will be forever grateful.

1.0 INTRODUCTION

The most interesting and deepest, and at the same time the most important concept of the Leibnizian monadology—the one without a full understanding of which a deeper penetration into that monadology would be impossible from the start—is the concept of representation.

— E. Dillmann, *Eine neue Darstellung der Leibnizschen Monadenlehre auf Grund der Quellen*, 1891

The notions of perception and representation (expression) play a central role in Leibniz’s philosophy, according to which the world comprises at bottom an infinity of perceiving substances which, having been endowed with a “representative nature,” cannot be limited to represent or perceive only a part of things.¹ These substances therefore represent all other substances, together with the entire physical universe, past, present, and future; in short, they all perceive the same thing, namely everything (DM §15 [51]; M §60 [309]). They do not, however, perceive all things equally well. Whereas God, the supreme monad, perceives all things perfectly or, as Leibniz prefers to say, *distinctly*, the perceptions of created monads admit of degrees of distinctness, and most of them will be so little distinct on the whole as to be merely *confused*. This fact is of the first importance for Leibniz, for he has the distinction between distinct and confused perception, and the idea that distinctness admits of degrees, doing a remarkable amount of work for him. I will establish these points in much greater detail later, but here at the outset let me at least mention the chief applications.

- Monads, the fundamental constituents of the world, are said to be individuated by “the degrees of their distinct perceptions” (M §60 [309]). Though they do not differ in *what*

¹The claim that monads have a representative nature appears in many places: G II 114; III 468; IV 476(=NS 26), 484-85, 523. The claim that this representative nature entails that monads must represent everything can be found at M §60 [309].

they represent, since they all represent the same things, they do differ with respect to *how well* they represent those things.

- A soul's union with its body consists solely in its perceiving its own body more distinctly than it perceives any other.
- *Understanding* consists in distinct perception, whereas *sensing* is confused perception.
- A substance's *freedom* consists in its distinct perception, and its *bondage* to its body and to external things in its confused perception.
- One substance can influence another only ideally, that is, in the mind of God; this occurs when the former substance represents the reason for the relevant changes more distinctly than does the latter.

Brief as it is, this sketch suffices to illustrate the centrality to Leibniz's system of his belief that that substances perceive things with diverse degrees of distinctness, some distinctly, others confusedly.

Lest I be accused of exaggerating the significance of representation to Leibniz's thought, let the reader observe the prominence our philosopher himself accords to that notion in attempting to capture the essence of his metaphysical system:

In short, the sum of my system comes to this: each monad is a concentration of the universe, and each mind an imitation of the divinity. In God the universe is not only concentrated, but perfectly expressed; but in each created monad there is distinctly expressed only one part, which is larger or smaller according as the soul is more or less excellent, and all the infinite remainder is expressed only confusedly. (G IV 553=NS 106 [234])

Bearing in mind that for Leibniz perception is nothing other than expression in a monad, we can see that this text establishes the centrality of both representation and perception to his thought. Even more suggestive is a remark he makes to Burcher De Volder in the course of their wide-ranging correspondence: "You seem to have grasped correctly my doctrine that every body whatever expresses all other things, and that every soul or entelechy whatever expresses its own body and through it all other things. But when you have uncovered the full force of this doctrine, you will find that I have said nothing else which does not follow from it" (L 531 = AG 178 [136]). This comment smacks of hyperbole, to be sure, but even so it betrays the fundamental significance Leibniz accords to representation (and perception) in his philosophizing. A similar comment appears in his reply to some of Isaac Jaquelot's

queries of the system of pre-established harmony: “The miracle or rather the marvel consists in this: that each substance is a representation of the universe from its own point of view. . . . Now, having established the point about the representation of the universe in each monad, the rest is only consequences, and your questions, Sir, seem to answer themselves” (G III 465–66 = NS 176 [140]).

Despite all this, Leibniz’s views on the subject have not received the attention they deserve and in many ways continue to be poorly understood. The notable exception is his theory of the nature of representation, which has been developed in fine fashion in a recent paper by Chris Swoyer (1995). Swoyer examines the textual evidence in detail and argues convincingly that Leibniz wants to analyze representation as a kind of structural correspondence—roughly an isomorphism—between representation and thing represented. My primary goal in this dissertation is to understand *perception* as it figures into Leibniz’s philosophy, but since perception is for him a species of representation, I begin, in Chapter 2, with an exploration of this latter concept. I accept and defend the essentials of Swoyer’s account, though many of my proposals and arguments go beyond his work. After presenting the basic textual evidence for this structural account (§2.1), I consider the case of linguistic representation (§2.2). I show that Leibniz adheres to a picture theory of language, according to which sentences represent, insofar as they do, in virtue of being structurally similar to the propositions they represent. Since (true) propositions themselves represent the world, and *represents* is a transitive relation, (true) sentences thereby represent the world. In §2.3, I turn to the challenging case of mental representation. I set the stage by defending an unorthodox taxonomy of the various mental phenomena recognized by Leibniz: perceptions, thoughts, ideas, concepts, and propositions. I then argue that he considers the last three to be enduring mental contents, which represent in virtue of structural resemblance, and the first two to be representings, or particular presentings of these contents to the mind. Finally, in §2.4, I consider Robert Brandom’s inferentialist reading of Leibniz, according to which one thing represents another in virtue of the fact that from a consideration of the representing thing we can deduce truths about the thing represented. The key insight captured by this view is that representation does typically entail the possibility of making such inferences. However, I argue that we arrive at a more plausible view if we suppose that representation

consists in structural correspondence and that it is this correspondence which makes such inferences possible. From my perspective, then, rather than analyzing representation as inference potential, Leibniz proposes to explain both representation and inference potential in terms of structural resemblance.

Considerably less progress has been made on an account of distinct perception.² Regrettably, the issue tends to get skirted in surveys, introductions, and the like, even those of a more scholarly nature.³ At most we find there only mentions of the relevant doctrines, with little attempt to explicate them in detail, or to wrestle with the apparent difficulties to which they give rise. In fact, the authors of such works often do not even state the doctrines carefully. It is remarkably common, for example, to find them using ‘clear’ and its cognates where Leibniz consistently uses ‘distinct’ and its cognates—a slip minor in itself, but symptomatic of an inattention to the precise meanings of these words.⁴ Beyond this, a few articles have appeared in which theories of distinct perception have been proposed, but though progress has been made, these studies have all been deficient in significant ways. Their failure has even led one commentator, Jonathan Bennett, to conclude that Leibniz’s concept of perceptual distinctness is hopelessly problematic, and that Leibniz must have failed to see this. The fundamental problem, according to Bennett, is that Leibniz wants that concept to shoulder more of an explanatory burden than any honest concept could ever bear (2001, 310-11). Clearly if this criticism prevails, it spells big trouble for Leibniz’s philosophy.

In the core chapters of this dissertation, I hope to redress these shortcomings in our understanding of Leibniz’s position, and thereby to show that Bennett has misjudged the situation. In Chapter 3, I assess the current situation, beginning with a detailed exposition of the various ways in which distinct perception figures into the Leibnizian philosophy. I then

²Cf. [Wilson 1992](#), 337: “I certainly agree that both Spinoza and Leibniz radically divorce the notion of perception from that of conscious, explicit awareness. I do not think, though, that this observation helps much to reduce the mystery of their views about perception; rather, it encapsulates a major part of the problem. . . . Moreover, emphasis on the distinction between distinct and confused perception is not apt to give much help with the difficulties, for this distinction is itself poorly understood in the case of both philosophers.”

³See, e.g., [Jolley 1995](#).

⁴See, e.g., [Russell 1900](#), §§82, 84-85, 95; [Rescher 1986](#), 70-72, 79-80; [1991](#), 170-71, 211, 218; [Savile 2000](#), 148-49. This slip also occurs in essays on related aspects of Leibniz’s thought: e.g., [Furth 1967](#), 19; [Kneale 1972](#), 226-33; [Wilson 1999a](#), 379-80; [Look 2002](#), 382-83, 386, 397.

turn to a consideration of the three most prominent accounts of distinct perception proposed in recent decades. On the prevailing view, distinctness correlates with awareness, whereas Brandom argues that distinctness is expressive richness, and Margaret Wilson construes it as rational priority in the mind of God. I argue that each of these proposals falls short of what we should expect from an adequate theory. In Chapter 4, I propose and develop an alternative theory, which I call the *explicit content account*. According to this view, a perception is distinct to the extent that its (representational) content or structure is explicit and therefore accessible to the subject, and confused to the extent that its content is merely implicit and inaccessible. Thus every perception has a structure in virtue of which it represents, but with confused perceptions that structure is for the most part beyond the grasp of the perceiver, as when one confusedly perceives a thorough mixture of yellow and blue as a uniform patch of green. With distinct perceptions, in contrast, most if not all of the structure is readily discernable. Though commentators have typically acknowledged that Leibniz sometimes speaks of perceptions as confused in this sense, they have imputed other notions of confusion to him too, and they have tended to think that he regards perceptions as distinct only in senses opposed to these other senses of confusion. Thus, they seem to have rejected, or not even considered, the thought that ‘distinct’ means ‘explicitly contentful’. However, I show that the explicit content theory not only enjoys significant textual evidence, but sorts well with and sheds considerable light on the various doctrines about distinct perception, doctrines which traditionally have not been well understood.

In Chapter 5, I argue that the explicit content account of *perceptual* distinctness also provides us with the correct account of the sense in which concepts (or ideas) are distinct, that is, with the correct account of *conceptual* distinctness. In §5.1, I present four arguments for the received view that concepts are not distinct (or confused) in the same sense as perceptions. In §5.2, I set myself against this perspective, arguing that for Leibniz, concepts, like perceptions, are distinct in the sense of having explicit content. In §5.3, I revisit the arguments for the received view and show that each of them should be rejected. Finally, in §§5.4-5.5, I consider Margaret Wilson’s well-known allegation that in his discussions of our confused ideas of sensible qualities, Leibniz tends to get confused about confusion. In opposition to this, I contend that Leibniz adhered to what may be called the thesis of the

redundancy of ideas, and that once we are sensitive to this thesis, we can make sense of all his pronouncements on this subject. What emerges from these chapters, I will argue, is a picture of the Leibnizian mind at once simpler, more comprehensive, and more enlightening than those suggested by previous work.

Though in writing this work I have tried to maintain a high standard of historical scholarship, and to arrive at a correct understanding of what Leibniz actually said and meant, I have been almost completely unconcerned with such historical questions as the origin and development of his views, possible influences on him and of him on others, and so forth. For this we already have, among other works, Paul Köhler's *Die Begriff der Repräsentation bei Leibniz: Ein Beitrag zur Entstehungsgeschichte seines Systems* (1913). Instead, I have confined myself for the most part to the period 1686–1716, the last thirty years of Leibniz's life, which scholars refer to as his “mature period.” I have found that with few exceptions, his views on perception and representation remain remarkably consistent throughout this period. Indeed, many of the relevant doctrines introduced in the *Discourse on Metaphysics* in 1686 continue to be maintained over the years and reappear in very late writings such as the *Monadology*. This has allowed me to ignore questions about development and focus on the more interesting task of pursuing philosophical understanding, which as I conceive it involves not only studying the textual evidence closely, but where necessary and to the extent possible, reconstructing the philosopher's views, calling attention to apparent tensions and difficulties inherent in them, and attempting to resolve such problems.

I have relied on many sources for Leibniz's writings, both translations and original-language collections. In citing these documents I have used the abbreviations given at the end of the work. Though most of the texts I cite have multiple sources, I usually cite only one of these sources, either an original-language one if I have translated it myself, or another's translation otherwise. Also toward the end of the work the reader will find an appendix in which I have collected all of the texts of particular relevance to the issues I discuss. This should prove a very helpful resource given that, as students of Leibniz know well, his views on most any given subject are likely to be found expressed in various essays, fragments, and letters scattered throughout his corpus. (Thanks to Bob Brandom for suggesting the idea of such an appendix.) I considered arranging the texts topically, as Bertrand Russell

did in the appendix to his classic *The Philosophy of Leibniz*. However, since many of the texts pertain to multiple topics, I would have been forced either to duplicate many texts, or not to include some texts in categories to which they properly belonged. Hence, I decided on a (roughly) chronological ordering. This has the disadvantage of making it difficult to find the texts pertaining to a specific topic, but I hope this disadvantage is outweighed by the advantages of a chronological ordering, one of which is that changes (or the absence of change) in Leibniz's views over time are more easily discerned. In an ideal world, I would have provided an index to the passages, but both temporal and technological obstacles prevented this. I have, however, indexed the texts with numbers in square brackets (e.g., [39]), and as much as possible, I have tried to provide these numbers in addition to the standard citations when I have cited these passages in the body of the work.

2.0 REPRESENTATION

The concept of representation functions as an explanatory workhorse in the Leibnizian system. Yet it is not itself an unexplained explainer, a primitive and unanalyzable concept. For Leibniz self-consciously proposes a theory of representation, which he appears to regard as adequate for all genuine cases of representation. The task of giving such a unified account of representation might seem particularly difficult for Leibniz, given how pervasive he takes the phenomenon to be. He himself gives a variety of examples, which for convenience can be grouped into five categories. There are *physical* representations, such as the model that expresses a machine, or the map that expresses a geographic region. In addition, each body or material thing is said to represent all the others because of the interconnection of all matter in the plenum (M §65). In the *mathematical* realm, characters (e.g., numerals) represent numbers, equations express circles and other figures, and figures themselves represent one another, as when hyperbolas, parabolas, and ellipses express the circles of which they are projections onto a plane. Then there are *linguistic* representations, including sentences, both written and spoken, which express thoughts and truths, and gestures, which express speech. Leibniz also believes that every total effect represents its complete cause; thus, for example, the world must represent God, and a person's deeds her mind. For lack of better term, we can call these representations *metaphysical*. Finally, there are *mental* (or *mental-like*) representations: perceptions, thoughts, ideas, concepts, and the like. Through these, every substance represents its own body, the entire universe, all other substances (including God), and even all its past and future states.¹ In view of the remarkable diversity of these cases, we may be tempted to agree with Sleight (1990a, 174) that no single notion of expression could account for such a heterogeneous array of examples. Yet, as I hope to show, Leibniz

¹See Kulstad (1977, 57) for references.

holds otherwise: on his view, all these representations are fundamentally the same, in the sense that there is some one property exemplified by all and only those things, and in virtue of the possession of which they represent. What, then, is this property?

2.1 A STRUCTURAL ACCOUNT

In Leibniz's discussions of representation, the prevailing idea is that one thing represents another in virtue of bearing a certain kind of *relation* to its object. In the *New Essays*, for example, he claims that our ideas of sensible qualities have a "natural relation and connection" to their objects that amounts to a kind of resemblance. This resemblance, he goes on to say, is

not complete and, so to speak, *in terminis*, but expressive, or a relation of order, just as an ellipse, and even a parabola or hyperbola, resemble in some fashion the circle of which they are the projection on the plane, since there is a certain exact and natural relation between what is *projected* and the projection that it makes, each point of the one corresponding according to a certain relation to each point of the other. (NE 131 [173])

In calling this resemblance expressive, he indicates that it is in virtue of this relation of order that ideas of sensible qualities represent their objects, and projected figures the figures of which they are projections. In the geometrical case, we are told, this relation relates each point of the one figure to each point of the other, but beyond this we are told nothing here about the nature of this relation. Similar comments appear in various writings throughout Leibniz's mature period:

It is not necessary that what we conceive of things outside of us should resemble those things perfectly, but that it express them, as an ellipse expresses a circle viewed askew, in such a way that each point of the circle corresponds to one of the ellipse and vice versa, according to a certain law of relation. (G I 383–84 = NS 53 [42])

One thing expresses another (in my language) when there is a constant and ordered [*reglé*] relation between what can be said of the one and of the other. (G II 112 [73])

It is true that the same thing may be represented in different ways; but there must be an exact relation between the representation and the thing, and consequently between the different representations of one and the same thing. The projections in perspective of the conic sections of the circle show that one and the same circle may be represented by an

ellipse, a parabola, and a hyperbola, and even by another circle, a straight line and a point. Nothing appears so different nor so dissimilar as these figures; and yet there is an exact relation between each point and every other point. (T §357 [273])

It is sufficient for the expression of one thing in another that there should be a certain constant relational law, by which particulars in the one can be referred to corresponding particulars in the other. Thus a circle can be represented by an ellipse (that is, an oval curve) in a perspectival projection, and indeed by a hyperbola, which is most unlike it, and does not even return upon itself; for to any point of the hyperbola a corresponding point of the circle which projects the hyperbola can be assigned by the same constant law. (MP 176–77 [295])

In each of these we encounter the idea that expression requires a “law of relation” which in the geometrical case relates the points of the one figure to the corresponding points of the other. But beyond this Leibniz tells us precious little about what kind of relation he has in mind. He does characterize it as “exact” and “constant” (and “definite”: L 208 [13]), but he fails to explain what exactly he intends by these characterizations. We will therefore need to look elsewhere for clarification.

One point that does emerge clearly from these passages is that this relational law is both necessary (third text) and sufficient (second, fourth texts) for representation, but in fact there is another text in which Leibniz indicates that he has something stronger in mind. Our ideas, he says in the *New Essays*, represent the motions in bodies “through a rather exact relation” (*par un rapport assez exact*), which he characterizes in the context as an expressive resemblance like that an ellipse bears to the circle of which it is a projection, “each point of the one corresponding according to a certain relation to each point of the other” (NE 133 [175], 131 [173]). Thus, he apparently means to endorse the even stronger thesis that representation *consists in* such a law of relation. But the crucial question of the nature of this relation remains.

One proposal suggested by Leibniz’s talk of points corresponding to points emerges from Mark Kulstad’s (1977) careful treatment of this issue. On his reading, Leibniz holds that one thing expresses another in virtue of the existence of a one-one mapping of the one thing into the other.² In the geometrical case, this mapping relates points to points; in others, it relates some appropriate elements of the representation to elements of its object: for example, the

²Cf. Adams 1994, 286.

dots, lines, and colored regions of a road map to cities, roads, and bodies of water. But in any case, the relational law holding between representation and thing represented is construed as, in effect, a function pairing elements of the former with unique elements of the latter. Though this reading coheres nicely with the texts considered thus far, there are good reasons for doubting that it accurately describes Leibniz’s position. In the first place, if this view were correct, an expression would express anything with which it could be put in one-one correspondence, that is, anything that has at least as many elements or components as the expression. But though such a correspondence clearly seems necessary for representation, it hardly seems sufficient. For Leibniz believes that representation at least often underwrites inferences from facts about the representation to facts about the represented. In “What is an Idea?” he gives a series of examples of expressions—models, projections of figures, speech, characters, and equations—and goes on to remark that “What is common to all these expressions is that we can pass from a consideration of the relations in the expression to a knowledge of the corresponding properties of the thing expressed” (L 207 [13]). As [Brandom \(1981, 157\)](#) has correctly noted, this passing from expression to thing expressed amounts to a kind of inference, so the suggestion seems to be that we can deduce truths about the expressed from their expressions *because* the latter represent the former. It is because our idea of a circle represents the circle, for example, that “truths can be derived from it which would be confirmed beyond doubt by investigating a real circle” (L 208 [13]). However, if representation involved a mere one-one correspondence, then in general the only information we could extract from a representation about its object would be that the latter has at least as many elements as the representation itself (or exactly as many, if the correspondence is one-to-one and onto.) In the case of the idea of a circle, the most that could be deduced from the idea would be that it has no more constituents than the circle has points. To capture Leibniz’s thought, then, it seems we need something more robust and harder to come by than mere equipollence.

Moreover, there are texts in which Leibniz explicitly indicates that he has something stronger than mere one-one correspondence in mind. Of first importance is one of his earliest discussions of representation, in the essay “What is an Idea?,” where he states very plainly in what he takes expression to consist: “That is said to express a thing in which there

are relations that correspond to the relations of the thing expressed. . . . Hence it is clearly not necessary for that which expresses to be similar to the thing expressed, if only a certain analogy is maintained between the relations” (L 207 [13]). In view of the passages considered above, it is natural to understand this remark as involving the claim that expression consists in the existence of a law of relation which maintains an analogy or correspondence between the relations of the expression and those of its object, where the relations [*habitudines*] of a thing would be relations on the elements, ingredients, or constituents of the thing. Thus in the case of a road map, its relations would be (certain) relations the various dots, lines, regions of the map bear to one another. And this map would be a representation in virtue of the existence of a “law of relation” that relates these elements of the map to elements of the thing mapped in such a way that an analogy is maintained between the relations obtaining among the elements of the map and the elements of what it maps. Consider for the purposes of illustration an ordinary map of the United States of the sort that can be found in a road atlas. Such a map represents, among other things, the approximate distances between major cities. Thus if Atlanta is farther from Boston than it is from Chicago, the dot on the map labeled ‘Atlanta’ will be farther from the dot labeled ‘Boston’ than from the one labeled ‘Chicago’. Similarly, the map will represent the approximate sizes and shapes of bodies of water. What is happening here, clearly enough, is that the map is designed in such a way that its elements (the dots, lines, regions, etc.) bear relations to one another that correspond to or are analogous to the relations that the elements of the thing represented bear to one another. In the same way, an analogy of relations no doubt obtains between a model and what it models. That is why we can discover truths about the thing modeled by experimentation on the model itself, as when we test how a plane will fly by studying a model in a wind tunnel.

The suggestion, then, is that Leibnizian representation involves a kind of structural correspondence—in essence, something like what we today call an *isomorphism*.³ In mathe-

³Other scholars have endorsed this suggestion, though typically only in passing: [McRae 1976](#), 23, 42; [Rutherford 1995](#), 236; [Simmons 2001](#), 67-68. The notable exception is [Swoyer 1995](#), though he shies away from assimilating this structural correspondence to isomorphisms. He does so because he understands isomorphisms to require a complete and perfect correspondence, which is often lacking in cases of representation. I, however, will use ‘isomorphism’ more loosely to refer to any structure-preserving relation, whether complete or not.

matics, isomorphisms are structure-preserving functions or mappings from one structure to another. A *structure* can be thought of as a set of objects (its domain) together with a set of relations on those objects; hence an isomorphism is a function that maps the elements and relations of one structure to those of another in such a way as to preserve the structure. More precisely, a function f from structures \mathfrak{R} to \mathfrak{R}' is an isomorphism just in case f satisfies the following condition for any relation R of \mathfrak{R} :

$$\langle x_1, \dots, x_n \rangle \in R \Leftrightarrow \langle fx_1, \dots, fx_n \rangle \in fR$$

If this condition is met, then \mathfrak{R} and \mathfrak{R}' are said to be isomorphic, and the relations of \mathfrak{R} can be said to be analogous to, or to correspond with, those of \mathfrak{R}' . Thus, it is very natural to understand Leibniz’s talk of the relations of an expression being analogous to or corresponding with those of its object as involving, in essence, the idea of isomorphism. From this perspective, Leibniz’s “law of relation,” which holds between an expression and its object, is like the structure-preserving mapping of a mathematical isomorphism. When he says that the points of one figure correspond to those of another according to a certain law of correspondence, the law he has in mind is structure-preserving in the way that an isomorphism preserves structure. This conclusion receives further support from the fact, established persuasively by Swoyer, that the essential feature of Leibniz’s favorite example of expression, the perspectival projection, is that “the *pattern* of projective relations and attributes among the constituents of the represented phenomena is *mirrored* by the pattern of such relations and attributes among the constituents of the expression of it” (1995, 79). In short, that is, the represented and its representation are in significant ways isomorphic.

The isomorphic structures encountered in mathematics constitute special cases of Leibnizian representations. One of their features which does not generalize is that they typically have only one “level” of structure. Their structure is exhausted by a set of relations on their domain, and if we know what these relations are, we know the only sense in which the structure has structure, and therefore the only sense in which it represents. With most representations, however, matters are otherwise. Consider the case of a typical road map, which can be viewed as a representation *qua* map and a representation *qua* material body. *Qua* map, it represents some network of roads through the relations obtaining among its

dots, lines, and regions. *Qua* material body, however, Leibniz would say that it represents not only that network of roads, but indeed every other body in the entire universe, because of the interconnection of all matter in the plenum. In the latter case, the map represents not in virtue of the relations obtaining among its dots, lines, and regions, but rather in virtue of those obtaining between the infinitely many smaller bodies composing it. In this sense, the map can be said to have two levels of structure or representation, whereas mathematical structures typically have only one.

This difference in levels gives rise to another difference between mathematical isomorphisms and the representation relation: whereas the former is an equivalence relation, the latter is not. The representation relation, like isomorphisms, will be reflexive and symmetric: every representation will represent itself (will be automorphic), and whenever A represents B , B will also represent A . But it will not generally be transitive. To see this, we need only consider a case in which at one level B is represented by A , while at another level B represents C . In such a case A might well not represent C , even though A represents B and B represents C . So the representation relation will always be reflexive and symmetric, but it will not always be transitive.

In promoting this sort of structural account, Leibniz sees himself as advocating a return to earlier ways of thinking about representation which had fallen out of favor in the seventeenth century. Descartes and many others had emphasized, against traditional wisdom, that representation need not involve any resemblance between *res repraesentans* and *res repraesentatum*.⁴ Indeed, by 1739 Hume considered to be the fundamental principle of the “modern philosophy” the opinion that sensible qualities are “nothing but impressions in the mind, derived from the operation of external objects, and without any resemblance to the qualities of the objects” (*Treatise*, I, iv, §4). The truth in this denial of resemblance, from Leibniz’s perspective, is that expression does not require a *superficial* similarity or *perfect* resemblance (cf. G I 383 [42]; L 207 [13]; T §357 [273]; cf. NE 389–90 [216]). But in his opinion, philosophers had thrown the baby out with the bathwater in denying resemblance a role in representation outright. For representations must still bear a kind of *abstract* (structural) resemblance to their objects, as he urges at length in his review of François Lamy’s

⁴See Descartes, AT VI 131, VIII 359; Locke, *Essay*, II, viii, §15; etc.

We do not agree with the opinion accepted by many today, and followed by our author, that there is no resemblance or relation between our sensations [*sensations*] and corporeal traces. It seems rather that our sensations [*sentimens*] represent and express them perfectly. Perhaps someone will say that the sensation [*sentiment*] of heat does not resemble motion: yes, without doubt it does not resemble a sensible motion, like that of a carriage wheel; but it does resemble the assemblage of small motions in the fire and in the organs, which are its cause; or rather it is only their representation So all the jibes and ranting against the schools and against the ordinary philosophy, according to which our sensations bear a resemblance to the traces of objects, are useless, and arise only from excessively superficial considerations. We can also see from this that God does not “present ideas of any kind he pleases to the soul on the occasion of traces in the brain,” as the author says, but only the ones which resemblance requires. And there is room to be astonished that excellent philosophers today can suppose that God acts in a way which is so arbitrary and so undetermined (that is to say, so destitute of reason) in establishing the laws of nature, whether for thoughts or for motions. This would be an insufficient use of his wisdom, which is always directed towards choosing the most suitable. (G IV 575–76 = NS 141–42 [84]).⁵

Here, as elsewhere, Leibniz addresses himself specifically to ideas of sensible qualities in affirming a resemblance between representation and thing represented. But we should not infer from this that he thought differently of other representations, for he holds that all representation involves resemblance.⁶ He merely tends to emphasize the point in connection with ideas of sensible qualities because it was in that case that resemblance had typically been denied. I will have more to say about this in §2.3.3 below.⁷

⁵See also NE 131–33 [173–176], 264 [200], 296 [206], 403 [220]; T §340 [271]

⁶Though to my knowledge Leibniz never cites pictures and paintings as instances of representations, he presumably does think of them as such instances. For recent defenses of the traditional idea that pictures and the like represent their objects in virtue of resemblance, see [Budd 1993](#) and [Hopkins 1998](#).

⁷Nelson Goodman (1968, 3–4) has criticized views that assimilate representation to resemblance on the ground that the two differ in fairly obvious ways. First, he claims, resemblance is always reflexive, whereas representation is generally irreflexive: everything resembles itself to the maximum degree, but things rarely represent themselves. Second, representation, but not resemblance, is asymmetric. When *A* resembles *B*, *B* always resembles *A*, but when *A* represents *B*, *B* typically does not represent *A*. For example, a portrait of the Duke of Wellington represents the Duke, but not vice versa. Finally, one thing can resemble another without representing it; this is the case with the qualitatively very similar automobiles produced on an assembly line, or with a pair of identical twin brothers. In view of these considerable differences, Goodman concludes, representation cannot consist in resemblance. Clearly this objection applies to Leibniz’s position, both because he considers representation to be a kind of resemblance and because he has committed himself (on my reading) to representation being reflexive and symmetric. However, I believe that if confronted with this objection, he would reply by rejecting the intuitions to which Goodman appeals. What the objection shows, Leibniz would say, is not that representation cannot be as he supposes, but that our commonsense beliefs about what does and does not represent what are sometimes mistaken. Of course, if the theory conflicted with too many of our intuitions, that might be grounds for doubting the theory; but otherwise we should allow our theory to correct our commonsense beliefs, rather than the other way around.

We now have the basic evidence for the structural account on the table, and we have seen how this account handles rather nicely some straightforward cases, namely, maps, models, and perspectival projections. We will find still more evidence when we investigate the more interesting case of the representationality of language.

2.2 LINGUISTIC REPRESENTATION

Leibniz includes among his examples of representations numerous linguistic items, both spoken and written: speech represents thoughts, truths, and even gestures (L 207-8 [13]), while written signs, or characters, express numbers, thoughts, ideas, and concepts (L 193, 207 [13]; AG 240; B 80-81; S 14=G VII 200; cf. S 17-19=G VII 204-5). Even algebraic equations can be used to express figures such as circles (L 207 [13]). It may seem, however, that such linguistic “expressions” could not *express* what they are about in virtue of any structural correspondence, given that, in general, words and sentences are structurally quite unlike the objects of their intentionality. The character ‘9’, for instance, bears no similarity, structural or otherwise, to the number nine, and neither ‘Paris’ nor ‘the capital of France’ is isomorphic to the city of Paris. Similarly, the syntactic structure of the equation $x^2 + y^2 = 1$ would seem to have virtually nothing in common with the structure of the circle it putatively represents, the former structure relating only a few simple characters (‘ x ’, ‘ y ’, ‘1’, etc.) to one another in a fairly simple way, the latter relating an infinity of points in highly complex ways. Such observations have led some recent proponents of structural accounts of representation to deny that language represents. Colin McGinn (1989, 181–84), for example, maintains that mental contents represent in virtue of structural correspondence, but since he does not think sentences (and other bits of language) correspond structurally to what they supposedly represent, that is, to the states of affairs in the world they describe, he denies that mental representations can ever have a linguistic form. Similarly, Robert Cummins (1996, 111) writes: “I don’t think language represents at all. A complex expression has a structure, and hence represents whatever shares that structure according to PTR [the Picture Theory of Representation]. But the conventional meaning of an expression has nothing to do with its

representational content in this sense” (cf. 90–91).⁸ Leibniz, however, makes his position quite clear: language often represents, and insofar as it does, it does so in virtue of structural correspondence.⁹ Let us attempt to understand, then, why and to what extent he believes languages possess the sort of structure necessary for significant representation.

The objection that linguistic expressions do not generally share any significant structure with the objects to which they point is often buttressed by the observation that such expressions have only an arbitrary connection to their objects. It is an arbitrary matter that we use ‘7’ to indicate the number seven, for instance, or ‘the concept horse’ to denote *horse*. Such expressions are arbitrary precisely because they do not and need not bear any natural similarity, structural or otherwise, to their objects. Interestingly, Leibniz himself emphasizes this point on a number of occasions. In “What is an Idea?,” for example, he distinguishes between representations having a basis in nature and those that “are arbitrary, at least in part, such as the expressions which consist of words or characters” (L 208 [13]), and in a 1677 dialogue on the connection between words and things, he insists that there is no similarity between ‘0’ and nothing (or zero), between ‘lux’ and light, or between ‘ferens’ and the notion of *bearing* (L 184; cf. NE 278ff.). Such characters cannot, therefore, be regarded as representations, since they lack the necessary structural similarity. Rather, Leibniz classifies them as mere *significations*, where signification is a word’s “relation to ideas or things” (NE 287), but specifically a relation that consists not in some structural correspondence but merely an (arbitrary) association of a character with some thing. Thus, in the construction of an artificial language, “The value of a primitive character, that is, the value arbitrarily assigned to it and needing no proof, is its signification” (S 20=G VII 206). In the same way, the simpler and more primitive characters of natural languages, in the first instance words, will not represent but merely signify what they are about.

Leibniz therefore concedes the point that language does not represent at the ground floor. Yet when it comes to the complex characters built up out of the arbitrary primitive characters, he holds, we get something that is in a sense non-arbitrary and that makes genuine representation possible. In an important text from the the aforementioned dialogue,

⁸See also [Johnson-Laird 1983](#), 420-21.

⁹Leibniz is followed on this point by [Swoyer 1991](#).

we read that

if characters can be used for reasoning, there is in them a kind of complex mutual relation or order which fits the things, if not in the single words at least in their combination and inflection, although it is even better if found in the single words themselves. . . . Although characters are arbitrary, their use and connection have something which is not arbitrary, namely a definite analogy between characters and things, and the relations which different characters expressing the same thing have to each other. This analogy or relation is the basis of truth. For the result is that whether we apply one set of characters or another, the products will be the same or equivalent or correspond analogously. (L 184)

When Leibniz locates in the complex characters of a language a kind of “complex mutual relation or order that fits the things,” he is suggesting that such characters resemble or bear some natural similarity to their objects. This order, he goes on to explain, does not consist in the component characters themselves, which are arbitrary, but in their “use and connection,” that is, in the “definite analogy between characters and things, and the relations which different characters expressing the same thing have to each other.”¹⁰ In other words, the primitive characters themselves may be arbitrary, but when they are combined to form complex characters, they become connected or related to one another in ways that correspond to the ways in which the things they signify relate to one another.¹¹ It is precisely this feature of the characters that makes them suitable for reasoning; for since their internal order corresponds to the structure of the things they are about, we can deduce truths about those things from a consideration of the characters themselves. Thus, in designing a language, “If we assign to each primitive a character, it is possible to form other characters for the deriving notions, and we would be able to extract infallibly from them their prerequisites and the primitive notions composing them; to put it in a word, we could always infer their definitions and their values, and thereby the modifications to be derived from their definitions” (S 18-19=G VII 205).

We can illustrate what Leibniz has in mind in the following way. Imagine an artificial language with primitive symbols $+$, \times , \cdot , and \circ , among others. Suppose the point of this language is to represent concepts, and that this is to be achieved by assigning these simple

¹⁰Cf. Leibniz’s claim just one year later in “What is an Idea?” that representation occurs when “a certain analogy is maintained between the relations” of the expression and those of the thing expressed (L 207 [13]).

¹¹Leibniz makes a similar point in two other passages (L 231, 241): namely, that though characters or names may be arbitrary, non-arbitrary consequences nevertheless follow from them. The thought seems to be that these consequences follow from the non-arbitrary relations obtaining among the arbitrary characters.

symbols to the concepts we consider primitive, and then letting the symbol for a complex concept be formed by combining together (in some arbitrary way) the symbols signifying its constituent concepts. Thus, if for the sake of illustration we were to treat *rational* and *animal* as primitive concepts, we could assign them to $+$ and \circ , respectively. The symbol \oplus would then correspond to the concept *man*, since man is a rational animal. Though the assignment of signs to primitive concepts would be entirely arbitrary, once these assignments are made, there would be more than an arbitrary connection between \oplus and *man*: they would correspond structurally insofar as \oplus would be composed of the symbols that signify the concepts composing *man*.¹² The character would therefore represent the concept. Furthermore it would be suitable for use in reasoning, for if someone who lacked the concept *man* were made aware of the assignments for the primitive characters, and were told that \oplus represents *man*, they would be able to deduce from a consideration of the character truths about the concept, namely that it includes *rational* and *animal*. The example is admittedly crude, but it serves to capture Leibniz’s basic idea.

Sometimes even words can exemplify a structure in virtue of which they represent what they denote. For example, though ‘lux’ bears no similarity to light, and ‘ferens’ no similarity to the concept of *bearing*, Leibniz claims that “their compound ‘lucifer’ has a relation to these two words, *light* and *bearing*, which corresponds to that which the thing signified by ‘lucifer’ has to the things signified by ‘lux’ and ‘ferens’” (L 184). Just as ‘lucifer’ is composed out of ‘lux’ and ‘ferens’, which mean light and bearing, respectively, so lucifer is something that bears light. That is, the concept *lucifer* can be resolved into the concepts *light* and *bearing*. So there is a simple kind of structural correspondence here in virtue of which we could say that ‘lucifer’ does not merely signify, but actually represents lucifer. Whatever we may think of the plausibility of this example, Leibniz does not think that words in general represent; they are just as arbitrary and structurally dissimilar to their objects as ‘lux’ and ‘ferens’, or as $+$ and \circ in the example of the previous paragraph. However, he does believe that if our characters were well-designed, they would often represent thoughts, ideas,

¹² \oplus would still be arbitrary, despite the fact that it mirrors the structure of *man*. But it would not be *entirely* arbitrary. Leibniz signals this when he writes: “It is also clear that some expressions have a basis in nature, while others are arbitrary, *at least in part*, such as the expressions which consist of words or characters” (L 208 [13], emphasis added).

and concepts. Specifically, a well-designed language would consist of simple characters that signify primitive concepts (or at least those we regard as primitive), and complex characters that are built up from the simple ones in ways that parallel the ways in which complex concepts are built up from the primitive ones. In a language of this sort, the analysis of characters would correspond to the analysis of concepts: “if the character expressing any concept is considered attentively, the simpler concepts into which it is resolvable will at once come to mind. Since the analysis of concepts thus corresponds exactly to the analysis of a character, we need merely to see the characters in order to have adequate notions brought to mind freely and without effort” (L 193). In saying that the the analysis of characters corresponds to the analysis of concepts, Leibniz is claiming that the characters would be built up from simpler characters in ways that parallel the way in which the corresponding concepts are built up from simpler ones. In this way, the character and the concept would have, at least to some degree, the same structure.¹³

One example of a language that would be designed according to this model is the ideal language or universal characteristic that Leibniz believed would one day be constructed. The universal characteristic was envisioned as a language in which the characters expressed perfectly, or at least very well, the concepts or thoughts they were about. These characters would “correspond to the analysis of thoughts” (G III 216) in the sense that the character expressing a composite thought would be composed of the characters that express the simpler thoughts composing it. As Leibniz puts the point in a letter to Countess Elizabeth, “this characteristic would represent our thoughts truly and distinctly, and when a thought is composed of other simpler ones, its character would also be similarly composed” (AG 239-40=G IV 295-96). What Leibniz calls the “characteristic art” therefore becomes “the art of forming and arranging characters . . . so that they have among themselves the relation that the thoughts have among themselves. . . . The law of expression is this: the expression of a thing is to be composed of the expressions of those things the ideas of which compose the ideas of the thing itself” (B 80-81).¹⁴ These passages bring out very clearly the way in which

¹³They may not have exactly the same structure, since the primitive characters may not signify truly primitive concepts. These concepts may have some unknown structure that is not captured by the simple characters we assign to them.

¹⁴Leibniz also holds that “There is some relation or order in the characters which is also in things, especially if the characters are well-invented” (L 184; cf. GM V 141). As we shall see in the next section, concepts

characters are supposed to represent in virtue of structural correspondence.

In many ways natural languages fall short of the ideals of Leibniz's universal characteristic. In such languages, we often use single words to denote concepts that we do not regard as primitive, and even when we use complex expressions for these concepts, they usually do not have the right sort of structure to count as representations of those concepts. Nevertheless, Leibniz would still claim that at the level of sentences our languages often represent. On his view,

Every true categorical proposition, affirmative and universal, signifies nothing but a certain connection between the predicate and the subject—in the direct case, that is, of which I am always speaking here. This connection is such that the predicate is said to be in the subject, or to be contained in it, and this either absolutely or viewed in itself, or in some particular case. Or in the same way, the subject is said to contain the predicate; that is, the concept of the subject, either in itself or with some addition, involves the concept of the predicate. And therefore the subject and predicate are mutually related to each other either as whole and part, or as whole and coinciding whole, or as part to whole. (L 236)

Our sentences thus have a certain structure which consists in the relation of the predicate to the subject, and this relation supposedly corresponds to the relation the concept of the predicate bears to the concept of the subject. For example, the sentence 'Socrates is a man' expresses the thought that the concept *man* is included in the concept *Socrates*. This sentence is true just in case the latter concept truly is included in the former. Whether it is true or not, though, the sentence can be thought to express a proposition (*enuntiatio, propositio*), which on Leibniz's view is just a relation between concepts (G VII 206=S 20; LP 86).¹⁵ Properly speaking, 'Socrates is a man' expresses the proposition that consists in the inclusion relation with *man* and *Socrates* as its respective relata. Thus the sentence relates the predicate to the subject in a way that parallels the way in which the proposition relates the concept of the predicate to the concept of the subject. In this way, the sentence manages to represent, though of course it may not represent the proposition very well if the subsentential expressions do not themselves represent, that is, if they do not mimic the structure of the concepts they signify.

One kind of linguistic representation not yet discussed is the algebraic equation that ex-

represent their objects in virtue of a structural similarity; thus, since characters are structurally similar to concepts, and concepts to things, it follows that characters will be structurally similar to things as well.

¹⁵For more on Leibniz's theory of propositions, see [McRae 1976](#), 72-73 and [Hacking 1982](#), 185-87.

presses a figure. This case is the most difficult to assimilate to the structural correspondence account. Clearly we can discover truths about a figure by performing operations on the equation that represents it. For example, from an equation for a circle I can deduce its area, using integration and other techniques of the calculus. This suggests that the equation must somehow have, either by itself or together with some background apparatus, some kind of (presumably relational or structural) correspondence with the figure, thus making it possible to deduce truths about the latter from the former. But I am not yet able to articulate the content of this correspondence. Swoyler speculates that “Leibniz’s talk of an equation expressing a figure is just convenient shorthand for the more unwieldy claim that the solution set of that equation expresses the figure” (1995, 91; cf. 86, 89-91). However, introducing the solution set of the equation hardly removes the difficulty, since the equation apparently represents that set too, an indication of which is that facts about the solution set can be deduced from a consideration of the equation. We would still need an explanation of how the equation manages to express this set, a difficulty no more tractable than the original one. The question how an equation could represent a figure therefore remains an open one.

Throughout this section I have been suggesting that on Leibniz’s view language represents in virtue of being structurally similar to the things it describes or is about. This cannot be precisely correct, though. At least language does not represent *solely* in virtue of structural correspondence. Consider the sentences:

1. Red is a color.
2. Green is a color.

These sentences represent different states of affairs, since one affirms that *red* includes *color*, whereas the other expresses that *green* includes *color*. Yet at the level relevant for determining what they represent in the conceptual sphere, they have exactly the same structure. So they must not represent solely in virtue of their structure. There must be something else to the expressions that contributes to determining what they express. That something else, of course, is the signification of the simple terms ‘Red’ and ‘Green’; what makes (1) represent something different from (2) is that ‘Red’ and ‘Green’ differ in signification. But structural differences in these words do not explain their different significations. Hence, we

have a difference in representational content without a (relevant) difference in structure. This requires us to say that when sentences and the like represent, they do so not solely in virtue of their structure, but in virtue of their structure together with the significations of their simple (primitive) elements. Their representational content is not just a function of the relations of their parts, then, but also of the parts related. This is how things must be in order for linguistic representation to make sense within a structural framework. In view of this point, perhaps it would be more acceptable to maintain that sentences are instances of a kind of impure expression or quasi-representation. For there is a sense in which they correspond structurally to things, and to the extent that they do, we can deduce truths from them about those things. But this only works when the nodes of the structure, so to speak, have the right significations. So unlike models and portraits, which “have a basis in nature” (L 208 [13]), sentences would not, from this point of view, be representations in the fullest sense of the term. But we have no evidence that this is Leibniz’s point of view.

Leibniz’s views about linguistic representation raise many other questions and puzzles, but it would take us too far afield to address them here. My goals for this section have been rather modest. The first was to show that Leibniz conceives language as having a kind of structure in virtue of which it represents. The texts I have discussed do seem to establish this point clearly enough, and to the extent that they do, they provide further support for my reading of Leibnizian representation as structural correspondence. The second goal was to give some indication of the way in which (on Leibniz’s view) language manifests the requisite structure. Here too some progress has been made, though significant questions remain unanswered. Most notably, it remains to be seen how algebraic equations can represent figures through isomorphism.

2.3 MENTAL REPRESENTATION

For our purposes, mental representation is the most important form of expression, since we are primarily concerned with Leibniz’s views about perception, and perception is (roughly speaking) a kind of mental representation. My aim in this section will be to shed some

light on how perceptions and other mental representations manage to express in virtue of structural correspondence. First, however, we need to get clear on some terminology, given that Leibniz's use of terms such as 'perception' and 'thought' differs in important ways from what would be considered ordinary usage these days. Along the way, I will also be giving a taxonomy of the various sorts of mental representations that enter into his deliberations. With this stage-setting complete, I will then tackle the issue of how mental representation is supposed to work.

2.3.1 Terminology and Taxonomy: Perceptions and Thoughts

Leibniz defines perception repeatedly in his writings, though in doing so he does not always employ precisely the same language. Most often he construes perception as the representation of a multitude in a unity, or equivalently, of many things in one. This particular formulation appears as early as the mid-1680s (LC 321) and again in numerous texts written over the next thirty years.¹⁶ Less frequently he defines perception as the representation of the composite in the simple (G VII 566; PNG §4), of a plurality in the simple (L 662-63), or of the external in the internal (PNG §§2, 4; cf. MP 176). These diverse characterizations have in common the idea that perception is the expression of one kind of thing in another, and though they differ at least nominally in how they describe these kinds, Leibniz appears to have considered them extensionally equivalent, as we see from this remark in a 1710 letter to Rudolph Christian Wagner:

Broadly speaking, soul will be the same as life or vital principle, that is, the principle of internal action existing in the simple thing or monad, to which external action corresponds. And this correspondence of internal and external, or representation of the external in the internal, of the composite in the simple, of multiplicity in unity, constitutes in reality perception. (W 505=G VII 529)

We may conclude from this that Leibniz, while varying his language, consistently defines perception as the representation of a multitude in a unity. In order to understand this definition, then, we need only ascertain the identity of these simple and internal unities in which perceptions are found, and of the external multitudes or composites represented there.

¹⁶L 91, 662-63, 664; NS 130; G II 311, III 622, VII 566; AG 214.

This task proves rather tractable because in some of his presentations, Leibniz explicitly clarifies his meaning. He writes, for example, that “*Perception* is the expression of many things in one, or in simple substance” (L 91), and that “The passing state which envelops and represents a multitude in the unity or in the simple substance is nothing other than what we call *Perception*” (M §14). So the unities of which he speaks are, not surprisingly, simple substances or monads, a conclusion which follows equally from the fact that perceptions are said to number among the modifications of such substances (PNG §2, etc.): to the extent that modifications can be said to be *in* anything at all, they are presumably in the things they modify. As to the multitudes or composites represented in perception, Leibniz is clear that these are none other than bodies or material things. “Even if the soul does not consist of parts,” he writes to John Bernoulli, “yet in its perceptions it expresses a thing consisting of parts, namely, the body” (L 513). And in a letter to Bayle he characterizes the soul as “a simple substance, or what I call a true unity . . . [which] nevertheless expresses a multitude, that is, bodies” (NS 132). Further support for this conclusion springs from the fact that the terms ‘composite’ and ‘multitude’ are ones Leibniz typically uses to denote bodies. Thus in §1 of the *Principles of Nature and of Grace*, just before he characterizes perceptions as “the representation of the composite, or what is external, in the simple,” he explains that “Composites or bodies are multitudes; and simple substances—lives, souls, and minds—are unities” (AG 207). These texts suffice to establish that for Leibniz perceptions are the representations in simple substances of *bodies* or *material things*.

One point that emerges from this analysis is that contrary to what I suggested above, Leibnizian perception cannot be merely a kind of mental representation. For ‘perception’, as he uses the term, is more inclusive than ‘mental representation’ inasmuch as the latter refers only to the representations of a mind, whereas most perceivers are not minds. In Leibniz’s system, monads fall into three categories or grades: bare or simple monads, the souls of beasts, and rational souls or minds. Monads of all three types have perception, but only souls have awareness, and among these, only the rational ones have a faculty of reflection. Thus, all monads perceive, but only those of the highest level are capable of reason and therefore count as minds. Strictly speaking, then, only the perceptions of a rational monad

can be called mental.¹⁷ Nevertheless, non-mental perceptions do not differ from mental ones in any way that makes a difference for the present context, so we can speak of perceptions as if they were all mental representations.

Much confusion has arisen over Leibniz's use of the term 'thought', something for which he is at least partly to blame. One thing is clear: thought is some kind of perception. But what kind? Most commentators who have expressed themselves clearly on this question have taken thoughts to be *intellectual* perceptions; accordingly, they have been at pains to distinguish thoughts from sensations or sensory perceptions.¹⁸ Admittedly there is some license for this understanding. In a letter to Arnauld dated 9 October 1687, Leibniz explains:

Expression is common to all forms and is a genus of which natural perception, animal sensation, and intellectual knowledge are species. In natural perception and sensation it suffices that what is divisible and material and is found dispersed among several beings should be expressed or represented in a single indivisible being or in a substance endowed with a true unity. . . . But this representation is accompanied by *conscience* in the rational soul, and it is then that we call it thought. (G II 112=L 339)

Conscience here is, as it usually is in Leibniz, another term for reflection, so this passage might be taken to support the claim that a thought is a representation accompanied by an actual reflection, that is, a piece of intellectual knowledge rather than a sensation or mere perception. A text along similar lines appears in the *New Essays*, where he writes that though beasts have perception, "it is not at all necessary that they have thought, that is, that they have reflection or that which can be its object" (NE 134).¹⁹ Again the suggestion seems to be that thought involves reflection or reasoning, and therefore that thought is something

¹⁷Cf. [Simmons 2001](#), who considers even the perceptions of non-rational monads to be mental representations.

¹⁸[McRae 1976](#), 27: "The distinctions between perception, sensation, and thought provide the basis for Leibniz's grading of monads in a scale of beings. At the lowest level are *bare entelechies*, living things endowed with perception; above them are animal *souls*, endowed with perception and, in addition, the capacity for sensation; finally, there are *minds*, capable of perception, and sensation, but also of thought and reasoning" (cf. 129); [Brandt 1981](#), 153: "Thought is perception inferentially articulated in that it occurs in accordance with distinct ideas and necessary truths. Sensation is subject not to inference but only to imaginative association. Between these there are no intermediate degrees"; [Parkinson 1982](#), 17: "It is true that the way in which we think about things depends, to some extent, on our sensations; but this does not commit one to the view that sensing is thinking, nor is there any firm evidence that Leibniz held such a view" (cf. 15–17); [Simmons 2001](#), 41: "As for the more familiar Cartesian term 'thought', Leibniz is interested in changing the meaning of the term. . . . In its new and technical sense, 'thought' refers exclusively to the rational forms of perception possessed by minds alone—understanding, reflection and reasoning . . ." The understanding of 'thought' I will be urging is closer to that of [Rutherford 1995](#), 80–82.

¹⁹The objects of reflection are probably ideas or concepts; more on this below.

distinctively intellectual (cf. L 91). However, the preponderance of evidence suggests that in Leibniz ‘thought’ refers to any perception in a mind, whether intellectual or sensory.²⁰ Perhaps his most careful and detailed explanation of his terminology occurs in this passage, also from the *New Essays*:

...in my sense *understanding* corresponds to what in Latin is called *Intellectus*, and the exercise of this faculty is called *Intellection*, which is a distinct perception joined to the faculty of reflection, which is not in beasts. Any perception joined to this faculty is a thought, which I do not accord to beasts any more than understanding. So we can say that intellection occurs when the thought is distinct. (NE 173 [184])

This text clearly indicates that *any* perception of a rational substance counts as a thought. Notice that when Leibniz defines a thought as a perception “joined to” a faculty of reflection, he cannot mean that thoughts are only those perceptions that occur in conjunction with the *exercise* of this faculty. For he goes on to say that intellection occurs only when the thought is *distinct*. When a thought is confused, therefore, we do not have intellection or reflection, but we still have a perception that is “joined to” a faculty of reflection, evidently in the sense that it occurs *in the presence of* that faculty. What distinguishes thoughts from other kinds of perceptions, according to this text, is not that they are intellectual rather than sensory, but that they occur in beings capable of intellection. Further support for this conclusion comes from the fact that Leibniz frequently distinguishes between distinct and confused thoughts, where the former have to do with understanding and reflection, the latter with sensation.²¹ Many examples could be given, but this remark is representative: “Distinct knowledge, or intelligence, occurs in the actual use of reason; but the senses supply us with confused thoughts” (T §289 [266]).²² Thus, though Leibniz does not seem to be entirely consistent in his use of ‘thought’, the best evidence indicates that the distinction between intellectual and sensory corresponds to that between distinct and confused thoughts, not to that between thoughts and non-thoughts.²³

²⁰Simmons (2001, 41) claims that when Leibniz is not using ‘thought’ to mean intellectual perception, he uses it interchangeably with ‘perception’ itself. I have found no evidence for this assertion, apart from Leibniz’s admission that he *may* sometimes carelessly use the term in this wider sense (NE 210). Oddly, Simmons understands Leibniz to be admitting that he *frequently does* use the term in this wider sense.

²¹More on this in §3.1.3 below.

²²Cf. CA 152 = G II 71; NS 140-42; G VII 557; NS 117-18; NS 176; NE 117 [169]; NS 103; T §§66 [263], 124 [264].

²³Contrast this with the claims of McRae and Parkinson: “Sense perception is not confused thought” (McRae 1976, 129); “It is true that the way in which we think about things depends, to some extent, on our

It would be worthwhile to pause here to note an apparent incoherency in Leibniz's terminology. He holds thought to be a species of perception, yet abstract thoughts such as those of God, numbers, infinity, figures, and the truths of mathematics and metaphysics do not seem to be embraced by his definition of perception, since they do not seem to be representations of any multitudes or composites, that is, of bodies or material things. At most, then, this definition would seem to characterize only *sense* perception, and not perception in general. This difficulty brings us face-to-face with an interesting feature of Leibniz's philosophy of mind to which commentators have not paid sufficient attention. For he does indeed hold that even our most abstract thoughts express material states, specifically, bodily states. As a result of the pre-established harmony, he thinks, there must always be an "exact relation" or "natural correspondence" between the perceptions of the soul and the states of the body (G VI 514; NE 117 [169]). "I have established a perfect parallelism," he explains in his *Reflections on the Doctrine of a Single Universal Spirit* (1702), "between what happens in the soul and what takes place in matter. I have shown that the soul with its functions is something distinct from matter but that it nevertheless is always accompanied by material organs and also that the soul's functions are always accompanied by organic functions which must correspond to them and that this relation is reciprocal and always will be" (L 556; cf. NS 140, NE 116). Of course, there is no explicit mention of representation in these remarks, but it is natural to suspect that the "exact relation" or "natural correspondence" which Leibniz sees as obtaining between perceptions and bodily states is nothing other than the sort of (structural) correspondence that, I have been arguing, is necessary and sufficient for representation. And this suspicion is confirmed by Leibniz's claim that "thoughts of the soul . . . must represent what happens in the body" (G VII 557), and his belief that "there is nothing in the soul which is not also expressed in the organs of the body" (NS 176; cf. L 530; D vi). On Leibniz's view, then, the pre-established harmony requires that body and soul correspond in such a way that every thought of the soul represents some bodily state, while in turn every bodily state represents some perception of the soul. And if this is so, it follows that every thought, no matter how abstract, must represent some corporeal state.

sensations; but this does not commit one to the view that sensing is thinking, nor is there any firm evidence that Leibniz held such a view" (Parkinson 1982, 17).

Leibniz repeatedly emphasizes that this is indeed his position, as the following quotations illustrate:

I believe that even the more abstract thoughts are represented by some traces in the brain.
(G VI 514)

And the body is so constructed that the soul never makes decisions to which bodily movements don't correspond, even the most abstract reasonings having their place there, by means of the characters which represent them to the imagination. (NS 112)

This has meant that certain movements, which are rightly called involuntary, have been attributed to the body to such an extent that they have been believed to have nothing corresponding to them in the soul: and conversely it has been thought that certain abstract thoughts were not represented in the body. But both of these are mistaken, as often happens with this sort of distinction, for we have taken note only of what is most obvious. (NS 117)

But how is it possible for an abstract thought, such as my thought of Goldbach's (second) conjecture, to represent a physical state of the brain? The answer to this question, according to Leibniz, lies with the fact that "the most abstract thoughts always employ *signs* [*signes*] which touch the imagination" (NS 140). In the second quotation above, he puts the point by saying that even the most abstract reasonings have their place in the body "by means of the characters [*caracteres*] which represent them to the imagination" (NS 112). Elsewhere he cites as examples of these characters the symbols of arithmetic and algebra, without the use of which we would be unable to think of arithmetic and algebraic truths (NS 177=G III 466; AG 226; cf. L 184).²⁴ (Presumably he is here thinking not of physical signs but their mental correlates, since they are said to represent things to the *imagination*.) What Leibniz is getting at in these remarks, I suggest, is that these mental signs, or characters of the imagination, are in effect the *matter* of our thoughts, and that we have abstract thoughts through thinking with these characters, which themselves represent the object of the thought. I have been unable to find much direct textual support for this suggestion; however, in the *New Essays* Leibniz does remark that "The senses provide us with the matter [*le matiere*] for reflections, and we could not think even of thought if we did not think with some other thing, that is, with particularities that the senses provide. And I am persuaded that created souls and

²⁴Cf. G VII 204=S 18: "Under the term sign I comprehend words, letters; chemical, astronomical, and Chinese figures; hieroglyphs; musical, cryptographic, arithmetic, algebraic notations; and all other symbols which in our thoughts we use for the signified things. When the signs are written, drawn, or carved, they are called characters [*caracteres*]."

minds are never without organs and never without sensations, as they cannot reason without characters” (NE 212 [195]). The matter of thoughts, he seems to be claiming, consists in the characters that the senses provide and without which we could not reason. If this is correct, then on Leibniz’s view, when I think of Goldbach’s conjecture, what I am thinking *with*—the matter of my thought, so to speak—is some combination of symbols which collectively express that thesis. And just as communicating Goldbach’s conjecture to another person would require the use of some characters, written or spoken, in the same way thinking of that thesis would require the use of some mental characters which play the same role in my thought as the written or spoken characters play in my communication of that thought.²⁵

Notice that if these mental characters are in effect the matter of thought, then it would not much matter which particular characters one uses to think the thought in question. What would matter is only that those characters bear the right sorts of relations to one another: that is, that the thought have the proper *form*. And as it happens, this appears to be precisely Leibniz’s view:

... we cannot have abstract thoughts which have no need of something sensible, even if only characters such as the sounds and shapes of letters, though there is no necessary connection between such arbitrary characters and such thoughts. (NE 77 [160])

The majority of our reasonings, mainly those involved in major issues, are performed by playing with characters... This helps one to understand how the body expresses by its own laws all that happens in the soul. For this play of characters can go far, and indeed does go far, even to the point that we could not think abstract things without the help of arbitrary characters. (D vi)

These texts bring out clearly the point that *which* particular characters we employ in our abstract thoughts is an arbitrary matter. That is because, though the complex characters

²⁵The idea that thinking requires the use of symbols appears to have an ancient lineage; see, e.g., Aristotle, *De Anima*, 431a16-17; Aquinas, *Summa Theologiae*, 1a, 84, 7; 89, 1; *Quaestiones de Anima*, q. 15. I have found Frege’s exposition of the point in the opening paragraphs of his *Über die wissenschaftliche Berechtigung einer Begriffsschrift* (1882) most helpful. Here are two excerpts: “Time and again, in the more abstract regions of science, the lack of a means of avoiding misunderstandings on the part of others, and also errors in one’s own thought, makes itself felt. Both shortcomings have their origin in the imperfection of language, for we do have to use sensible symbols to think”; “Symbols have the same importance for thought that discovering how to use the wind to sail against the wind had for navigation. Thus, let no one despise symbols! A great deal depends upon choosing them properly. And their value is not diminished by the fact that, after long practice, we need no longer produce symbols, we need no longer speak out loud in order to think; for we think in words nevertheless, and if not in words, then in mathematical or other symbols” (83-84).

that represent are not altogether arbitrary, they are composed of simple characters whose connection with things is wholly a matter of convention.

So Leibniz holds that even the most abstract thoughts employ characters of the imagination, which themselves collectively express what the thought expresses. But how does this get us to the conclusion that abstract thoughts express traces in the brain? After all, he holds that “there is never any abstract thought which is not accompanied by some images or *material traces*” (L 556; emphasis mine). Leibniz does not explain the connection explicitly, but his comments imply that he takes these characters of the imagination, these mental images, to correspond to and therefore represent some (presumably sign-like) states in the brain. Thus when I think some abstract thought, I do so through the use of some mental characters, which express both the object of the thought and some corresponding traces in the brain. At the same time, these brain traces also express the object of the thought. So whenever I think of Goldbach’s conjecture, there are traces in my brain which express that same thesis, and are expressed by my thought. Leibniz’s position on this matter can therefore be summarized in three points:

1. Thoughts, even very abstract ones, always employ some signs or characters of the imagination.
2. These signs are the matter of thought, and it is only through them expressing some object that the thought expresses that object.
3. These signs of the imagination also express traces in the brain to which they correspond, and therefore the thought of which these signs are the matter itself expresses those traces in the brain.

There is much here that deserves to be examined in further detail, but doing so would take us too far afield, and anyway enough has been said to make the basic point that I want to make, namely, that Leibniz holds, and thinks it plausible to hold, that even our most abstract thoughts constitute representations of some material reality in a simple substance, and therefore count as perceptions.

2.3.2 Terminology and Taxonomy: Ideas, Concepts, Propositions

“Considering the matter carefully,” Leibniz wrote to De Volder in 1703, “we must say that there is nothing in things but simple substances, and in them, perception and appetite” (AG 181; cf. G VII 501; L 608). This statement, and others like it, imply that perceptions are the only representations to be found in a monad (assuming, that is, that appetitions, the little desires or appetites that impel the substance from one perception to the next, do not represent). Yet in many contexts Leibniz takes care to distinguish perceptions and thoughts from others kinds of representations found in at least some monads: namely, ideas, concepts, and propositions. Thus in “What is an Idea?” he maintains that “by the term *idea* we understand *something which is in our mind*” and then adds that “There are many things in our mind, however, which we know are not ideas, though they would not occur without ideas—for example, thoughts, perceptions, and affections” (L 207 [13]). And he continues to distinguish between these two kinds of expressions throughout his mature period (cf., e.g., NE 119). It would seem, then, that the category of mental representation embraces not only thoughts but ideas, concepts, and propositions. What are these latter things, then, and what distinguishes them from one another and from thoughts?

Let us begin with the vexed question of the nature of ideas. Without question the dominant position taken by Leibniz scholars has been that ideas are a kind of disposition or propensity to think. Clear support for this view can be found, in the first place, in the obvious place to look for an answer to our question: the aforementioned essay “What is an Idea?” There Leibniz remarks: “In my opinion, namely, an idea consists not in some act, but in the faculty of thinking, and we are said to have an idea of a thing even if we do not think of it, if only, on a given occasion, we can think of it.” He goes on to add that an idea is a “power of thinking” or an “ability to think about a thing” (L 207, 208 [13]). This same thought resurfaces many years later in the *New Essays*, in the course of Leibniz’s classic defense of innate ideas. “This is how ideas and truths are innate in us,” he writes in the Preface, “as inclinations, dispositions, tendencies, or natural potentialities, and not as actions” (NE 52 [152]). And again in Book I: “Knowledge, ideas, truths can be in our minds without our ever having actually thought about them. They are merely natural tendencies,

that is, dispositions and attitudes, active or passive, and more than a *tabula rasa*” (NE 106 [164]; cf. 86–87). According to these passages, my idea of (say) a circle is nothing other than a disposition or ability that I have to think of that figure. Hence, an idea of some thing x is not an action or thinking of x ; it is a potency, something present in the mind even when we are not thinking of x . It is on the strength of these passages that many commentators have adopted the view that Leibnizian ideas are merely dispositions to think.²⁶ Call this view the *disposition account* of ideas.

It seems to me that these commentators have been too quick to conclude that the disposition account represents Leibniz’s considered judgment on this matter. For there is also significant evidence for another, apparently incompatible view, which I will call the *object account*. In brief, this is the theory that ideas are the “immediate internal objects” of our thoughts. Leibniz inherited this expression from Malebranche, who in the 1680s was engaged with Arnauld in a controversy over the nature of ideas. That debate forms the background of the following discussion of ideas in §26 of the *Discourse*:

In order properly to conceive what an idea is, we must prevent an equivocation. For some take the idea to be the form or difference of our thoughts, and thus we have an idea in the mind only insofar as we think of it; every time we think of it anew, we have other ideas of the same thing, though similar to the preceding ones. But it seems that others take the idea as an immediate object of thought or as some permanent form that remains when we are not contemplating it. And, in fact, our soul always has in it the quality of representing to itself whatever nature or form there is, when the occasion to think of it presents itself. And I believe that this quality of our soul, insofar as it expresses some nature, form, or essence, is properly the idea of the thing, which is in us and which is always in us, whether we think of it or not. (DM §26)

Arnauld’s position is the first of those described; following Descartes, he holds that ideas are the *forms* of thought. The second view, on which ideas are characterized as *immediate objects* of thought, belongs to Malebranche. Leibniz does not clearly endorse either position in this text, but he appears at least to express sympathy for Malebranche’s view. The key difference between the two, as he sees it, is that Arnauld’s ideas, being the forms of thought, depend for their existence on the thought they modify, and thus are as transitory as perceptions, whereas the immediate objects of thought can subsist in the mind even when we are not thinking of them. Leibniz goes on to indicate that he too understands ideas to be something

²⁶See [Loemker 1946](#); [McRae 1965](#), 73–76; [Brandom 1981](#), 150; [Jolley 1990](#), 132–39.

enduring, and to that extent at least he sides with Malebranche in this controversy.²⁷ On the other hand, an argument could be made that he is actually endorsing the disposition account again, though not in very clear language. He claims that an idea, properly speaking, is the soul's quality of representing things to itself when the occasion presents itself. One could argue that this quality is nothing other than the soul's disposition or ability to think.²⁸ If that is right, then Leibniz would once again be endorsing the disposition account. But even so, there are other, later texts in which the object account receives explicit support. In a series of reflections composed in the 1690s on Locke's *Essay*, Leibniz remarks: "But the idea being taken for the immediate internal object of a notion, or of what the logicians call an incomplex term, there is nothing to prevent its always being in us, for these objects can subsist when they are not apperceived" (La 21).²⁹ Then in the *New Essays*, he gives his most explicit endorsement of the view. Quoting *Essay* I, i, 8, Philalethes asks whether it is not true that "an idea is the object of thinking," to which Theophilus replies:

I agree about that, provided that you add that an idea is an immediate inner object, and that this object expresses the nature or qualities of things. If the idea were the *form* of the thought, it would come into and go out of existence with the actual thoughts which correspond to it, but since it is the *object* of thought it can exist before and after the thoughts. Sensible outer objects are only *mediate*, because they cannot act immediately on the soul. God is the only *immediate outer* object. One might say that the soul itself is its own immediate inner object; but that is only to the extent that it contains ideas, i.e. something corresponding to things. (NE 109 [165])

Here again Leibniz expresses his preference for the view that ideas are the immediate internal objects of thought rather than the forms of thought because he wants ideas to be something permanent, and the objects of thought have this permanence, whereas the forms of thought are as transitory as thoughts themselves. He does not say what he takes these objects to be, but the idea seems to be that they are something like the *contents* of our thoughts. Finally, there are many contexts, especially in his dealings with Locke, in which Leibniz classifies confused ideas as images, or what we today call mental images.³⁰ But mental images seem to be more like the *contents* of certain thoughts than our abilities or dispositions to think

²⁷Cf. his discussion of the Arnauld-Malebranche controversy at L 155.

²⁸Jolley appears to think as much, for in his translation of this passage he renders '*qualité*' as 'disposition' (1990, 137).

²⁹Leibniz appears to have slipped here in speaking of notions rather than thoughts.

³⁰NE 262 [198], 451 [221], 487 [222]; cf. NS 219.

those contents. Something like the object account seems presupposed by such passages.

There is evidence, therefore, for two views on the nature of ideas: the dispositional account and the object account. They have in common the one element Leibniz consistently emphasizes: that ideas are capable of subsisting in the mind apart from the existence of any thoughts to which they correspond. Both the disposition to think and the thinkable content can exist apart from the thought, he holds, since dispositions can be unrealized and contents can fail to be thought. Yet, despite this similarity, the dispositional and object accounts appear mutually exclusive. If they were consistent, it would be possible for the idea to be both the disposition to think and what is thought. But that does not seem possible. For my ability to think of, say, Goldbach's conjecture clearly differs (and clearly must differ) from the conjecture itself. Perhaps Leibniz did not consider these accounts incompatible; that would at least explain why he endorses both theories in the early parts of the *New Essays*. But how are we to reconcile the two? He gives no clue.

Though these views are strictly incompatible, I believe we can achieve something of a rapprochement if we take the object account to be the more fundamental of the two. Suppose we let ideas be thinkable contents, that is, the immediate internal objects of thought. Then we can maintain that ideas, though not strictly speaking dispositions to think, constitute the categorical basis of those dispositions. Ideas, *qua* objects, would ground our dispositions to think those objects, because we can think those contents (in the relevant sense of 'can') only if they are available to our minds.³¹ From this perspective, to say that ideas are in the mind like dispositions is to say that they are present in the mind just in case we have the ability to think that thought. But the ability or disposition itself would be distinct from its basis. This proposal therefore allows for a partial reconciliation of the mutually exclusive positions, and a reasonable explanation of why Leibniz advocated them both even in a single context.

Ideas, then, will be regarded here as immediate internal objects of thought. They are not, however, the only such objects, for concepts and propositions will also fall into this category. Leibniz does not usually distinguish between ideas and concepts, and for most

³¹Here I have in mind a near rather than remote ability to think; for more on this distinction, see L 207 [13].

purposes these terms can be used interchangeably. They do differ, however, as we can see from this passage in the *Discourse*: “the expressions in our soul, whether we conceive them or not, can be called *ideas*, but those we conceive or form can be called *notions, concepts*” (DM §27). Accordingly, all the objects of our thoughts are ideas, but those objects that are not merely latent, but which we have actually thought at some time or another, are concepts. Concepts thus constitute a species of ideas. Propositions too are objects of thought, since they are constructions on concepts. As we saw in the previous section, Leibniz construes propositions as (possible) relations between concepts. In the simplest case, propositions express that some one concept is included in another, or something of this sort. Thus, just as my thought of (say) Socrates has my concept *Socrates* as its object, so my thought that Socrates is mortal, insofar as it expresses that *mortal* is included in *Socrates*, expresses the proposition that relates these concepts to one another in the same way. Propositions are thus a kind of complex, relational object of thought. But they are of the same basic type as ideas and concepts, which are the objects of our non-linguistic thoughts and perceptions.³²

How do these conceptual items relate to perceptions? Recall that perceptions are by definition the representations in a monad or simple substance. This would seem to entail that ideas, concepts, and propositions qualify as perceptions, for they are among the representations in monads. Yet, Leibniz frequently contrasts perceptions with ideas. The most salient difference between the two is that perceptions are occurrent and transitory whereas ideas are enduring. We saw above that in his discussions of the nature of ideas, the one point Leibniz consistently emphasizes is that an idea of x can subsist in the mind even when we are not thinking of x . “For ideas are in God from all eternity, and they are in us, too, before we actually think of them If anyone wants to take ideas to be the actual thoughts of men, that is permissible; but he will be opposing without reason the received ways of speaking” (NE 300). Thoughts and perceptions, by contrast, are said to be both the “passing states” of a monad (M §14) and its actions (DSR 524; NE 161; L 155, 599; cf. NE 52 [152]). Thus, whenever we think of some thing x , Leibniz seems to hold, there is in the mind

³²Ideas, concepts, and propositions are the objects of *thoughts*. Since thoughts occur only in minds, this means that these representations are exclusive to minds. Nevertheless, the perceptions of non-rational monads presumably have similar objects as well, though in Leibniz’s opinion these objects do not merit the titles “idea” or “concept.”

both a transitory representation of x (the thought) and an enduring representation of x (the idea) that may have preceded the thought and will definitely outlast the thought. His theory of the mind would be rather inelegant, however, if he held that when one thinks of, say, a circle, there are in the mind two representations: an idea of the circle and, over and above that, a thought of the circle that differs from the idea only in that it is fugitive rather than permanent. We arrive at a more elegant view if we take perceptions to be representations not in their own right but only insofar as they are connected with ideas. We know that Leibniz regards perceptions as some kind of action, though what kind of action he does not say. I suggest that we take them to be something like presentations, or better presentings, of ideas to the mind.³³ Our thinkable contents are present *in* the mind even when we do not think of them. But at various times these contents are presented *to* (or brought before) the mind, and that is what we call thinking.³⁴ From this perspective, ideas are the true representations, and perceptions can be considered representations (or presentings) only by courtesy, insofar as they are presentings to the mind of a representative content. Perceptions, on this view, are not representations over and above ideas; rather, their representational character is parasitic on that of the contents they present. Unfortunately, I cannot produce any clear textual justification for this suggestion about the nature of perceptions. But it does sort well with what Leibniz says on the subject. Moreover, it provides for a more elegant account of the workings of the mind, since it does not require us to posit multiple representations of a single thing at the same time. (If I am thinking of a circle, there is in my mind both a perception and an idea of the circle, but strictly speaking there is only one representation of that figure.)

An important corollary of this account of the nature of perception is that if we can explain how ideas and propositions represent, we will thereby have explained the sense in which perceptions represent, since perceptions are not representations over and above the enduring contents of our minds. What we need, then, in order to understand how mental representation works on Leibniz's view, is an account of how these contents manage to

³³Cf. Malebranche's view of perception as a mind's *receiving* of ideas [add reference]. Margaret Wilson 1977 also speaks of Leibnizian perceptions as "particular presentings," though she says little about what they present. She does seem to imply that perceptions are not presentings of ideas.

³⁴Of course, to say that they are presented is not to say that they are noticed; a *petite perception* would be a presenting that is not noticed.

represent.

2.3.3 How Mental Contents Represent

We encountered Leibniz’s most revealing statement on this head back in §2.1. That was his claim that between our ideas of sensible qualities and their objects there is a “natural relation and connection” or

a kind of resemblance which is not complete and so to speak *in terminus*, but expressive, or a relation of order, just as an ellipse, and even a parabola or hyperbola resemble in some fashion the circle of which they are the projection on the plane, since there is a certain exact and natural relation between what is *projected* and the projection which it makes, each point of the one corresponding according to a certain relation to each point of the other. (NE 131 [173])

That is, our ideas represent these qualities in virtue of a correspondence between the components of the ideas and the components of their objects, a correspondence analogous to that between the points in an ellipse and the points in the circle of which it is the projection. I have argued that this correspondence is structural and amounts to the existence of something like an isomorphism between the representation and its object. This structural correspondence, I contend, is in effect what Leibniz has in mind when he says that “each soul . . . contains in its depths an order corresponding to that of the universe itself” (L 559 = G VI 538).³⁵ If this is right, then ideas of sensible qualities (and, by extension, ideas in general) must likewise represent in virtue of structural correspondence. In order to see how ideas are supposed to represent, then, we need to understand in what sense if any ideas exhibit the same structures as their objects. This goal might seem particularly ill-conceived in the case Leibniz is discussing, namely our ordinary (sensory) ideas of sensible qualities, since these have almost universally been thought, on the basis of introspection, to be simple, in the sense that they lack any internal complexity. To many it has just seemed obvious that our ideas of colors, for example, have little if any structure at all.³⁶ This, however, is one of those (not altogether uncommon) points at which Leibniz diverges from the majority philosophical tradition. On his view, ideas (primitive ones notwithstanding) always have a

³⁵Cf. M §63 and G III 624, where Leibniz characterizes the world as “*la plus parfaite de toutes les structures.*”

³⁶Adams 1987, 233–34 Geivett numbers; Locke; et al.

kind of complexity or structure which consists in the simpler or more primitive ideas which are their constituents or ingredients, the ideas into which it would be resolved in analysis. In the case of ideas of sensible qualities, however, this structure is in a sense hidden from view, thus giving rise to the appearance of simplicity. “I believe we can say that these sensible ideas are simple in appearance,” he explains, “because being confused, they do not provide the mind with the means for distinguishing that which they contain. It is like distant things which appear round because we cannot discern the angles, although we receive some confused impression” (NE 120 [170]). Such ideas thus appear simple because “they involve too much minute detail for us to be able to disentangle what is concealed in them” (NE 389 [216]; cf. NE 170 [182]). Our idea of green furnishes an example. Introspection seems to reveal this idea to be simple, but according to Leibniz the microscope shows otherwise: “we do not discern the blue and the yellow which enter into the representation, as well as into the composition of the green, when the microscope shows that what appears to be green is composed of yellow and blue parts” (T §356 [272]). According to this passage, there is a sense in which the parts of green (i.e., yellow and blue) enter into our representation of green, though we are not told exactly (or even approximately) in what sense this happens. Returning to the *New Essays*, we find the answer:

It is obvious that green, for instance, comes from a mixture of blue and yellow; which makes it credible that the idea of green is composed of the ideas of those two colors, although the idea of green appears to us as simple as that of blue, or as that of warmth. So these ideas of blue and of warmth should also be regarded as simple only in appearance. I freely admit that we treat them as simple ideas, because we are at any rate not aware of any divisions within them; but we should undertake the analysis of them by means of further experiments, and by means of reason insofar as they can be made more capable of being treated by the intellect. (NE 120 [170])

As this passage makes clear, yellow and blue can be said to enter into our idea of green in the sense that the idea is composed of the ideas of yellow and blue. In other words, the structure or make-up of the idea parallels the make-up of its object: the fact that green is composed of yellow and blue, Leibniz says, “makes it credible that the idea of green is composed of the ideas of those two colors.” He does not say so explicitly, but I suggest that this is the sense in which our ideas supposedly bear a natural resemblance to their objects.

In point of fact, a (sensory) idea of green will have vastly more structure than this example suggests. For the ideas of yellow and blue, which are its constituents, will be no more simple than the idea of green; they will themselves be composed of smaller ideas, each of which will in turn be composed of smaller ideas, and so forth. Indeed, this will continue to infinity, Leibniz inclines to think, because of the infinitely divided character of matter: “if our eyes became better equipped or more penetrating, so that some colors or other qualities disappeared from our view, others would appear to arise out of them, and we should need a further increase in acuity to make them disappear too; and since matter is actually divided to infinity, this process could go on to infinity” (NE 219 [196]). If this is so, then our ideas of sensible qualities will have infinitely complex structures, even though they seem rather simple to us through introspection. But then this is what we would expect if our ideas are supposed to mimic the structure of their infinitely complex objects.

Leibniz believes that at a deeper level, green and other sensible qualities consist in collections or assemblages of minute instances of geometrical qualities, that is, shapes and motions. He did not possess a very detailed and well-confirmed theory of these corporeal foundations, though he did speculate on the matter from time to time,³⁷ and in 1699 he expressed hope that Newton’s forthcoming work on colors (the *Optics*, published in 1704) would make a significant advance (AG 287). Nonetheless, he was quite confident on *a priori* grounds that whatever the precise nature of these corporeal foundations, our ideas must resemble and express them. As he sees it,

the internal motions and the ideas that represent them to the soul resemble the motions of the object that causes the color, the warmth, the pain, etc., or in other words, they express by a rather exact relation, though this relation does not appear distinctly to us because we cannot disentangle this multitude of small impressions, whether in our soul, in our body, or in what is outside of us. (NE 132-33 [175]; cf. NS 141-42)

Here we see that the ideas of sensible qualities resemble and thereby represent the corporeal motions which “cause” them, and that they do so through a precise relation that involves a multitude of minute impressions in our souls of which we are unaware. I suggest that the picture Leibniz has in mind here is this: an idea of a sensible quality represents its object

³⁷Leibniz surmises that red might turn out to consist in the rotation of certain small globes, heat in a vortex of very fine dust, and sound in motions in the air (AG 186). He also holds that white is an assemblage of tiny convex mirrors (NS 141; L 96).

in virtue of its being composed of the ideas of the minute shapes and motions collections of which constitute that quality. This parallels the thought of the paragraph before last that our idea of green must be composed of the ideas of yellow and blue since green itself is composed of those colors. (cf. 131-32).

The same story applies to our ideas of pain. According to Leibniz,

It is true that pain does not resemble the movement of a pin, but it can resemble quite well the motions that this pin causes in our body, and represent these motions in the soul, as I have no doubt that it does. This is also why we say that the pain is in our body and not in the pin, whereas we say that the light is in the fire; because there are motions in the fire which are not distinctly sensible individually, though the confusion or conjunction of them becomes sensible and is represented in us by the idea of light. (NE 132 [174])

The idea of the pain caused by a pin-prick resembles and thus represents the motions the pin causes in my body, and the idea of light represents the motions in the fire. Leibniz does not say so explicitly, but these ideas presumably resemble and represent their objects, which are multitudes of motions, in virtue of structural correspondence. Though we are unable to detect it, these ideas are composed of the ideas of the various motions collections of which constitute the cause of the pain or of light.

The confused ideas of the senses are to be distinguished from distinct, intellectual ideas. Leibniz does not say much explicitly about how these latter ideas represent, but there are good reasons to believe that, like sensory ideas, they represent in virtue of structural similarity. In the first place, after pointing out in the *New Essays* that ideas of sensible qualities express their objects through a resemblance or orderly relationship, he goes on to add: “I have just pointed out that there is a resemblance or precise relationship in the case of secondary qualities as well as of primary” (NE 131 [174]). But our ideas of primary qualities are distinct, so we can say on the basis of this text that at least some of our distinct ideas are supposed to represent in virtue of structural correspondence.³⁸ Moreover, the principle of sufficient reason, fundamental to Leibniz’s thinking, requires that God make ideas resemble, or correspond naturally to, their objects, for otherwise there would be no rationale for matching an idea with one thing rather than another (cf. T §340 [271]; NE 131 [173]). Leibniz is quite explicit about this in the case of ideas of sensible qualities, because that is where

³⁸L 287, 292; AG 187-88; G I 332; NE 170 [182]; P 20 [10]; et al.

the natural connection had been denied (by Locke, Bayle, various Cartesians, and others), but the principle will apply equally to all other ideas (cf. NE 264 [200]). Therefore, it stands to reason that ideas in general will resemble their objects, and that they will do so in the same manner in which the confused ideas of sensible qualities resemble their objects: namely, through structural correspondence. And this can be seen to be a plausible suggestion. The characteristic mark of a distinct idea is that it can be analyzed, or, what is the same thing, its object can be defined. To say that it can be analyzed is to say that it has ingredients, and thus an ingredient structure. Leibniz never says so explicitly, but I take it that this ingredient structure is what makes a distinct idea a representation. Thus my concept *man*, for example, is distinct (to some extent) insofar as man can be defined as a rational animal. This definition is equivalent to a resolution of *man* into the concepts *rational* and *animal*. The point is that our distinct, intellectual ideas, like our sensory ones, have ingredients in virtue of which they represent their objects, though unlike the ingredients of sensory ideas, the ingredients of intellectual ideas can be grasped by us, and thus we can give definitions.

The final case to consider is that of propositions. We can see how propositions represent if we remember that on Leibniz's view, they are merely (possible) relations between concepts; that is, they are the mental analogues of (indicative) sentences, which (for Leibniz) always have a subject-predicate structure. Accordingly, propositions have a structure that corresponds to the structure of the sentences that express them. And it is in virtue of this same structure that they in turn represent what they are about. Consider the sentence "Socrates is mortal," for example. According to the Leibnizian analysis, this sentence relates the predicate 'mortal' to the subject 'Socrates', and thereby expresses the proposition that consists in the concept *Socrates* including the concept *mortal*. By the same token, we may say that this proposition represents Socrates's being mortal, or perhaps, speaking anachronistically, the state of affairs *Socrates's being mortal*. The same will be true with every other proposition: it will have a subject-predicate form, in the sense that it relates some subject concept *S* to some predicate concept *P*, and in virtue of this structure it will represent the state of affairs consisting in *S*'s being *P*. In this way, sentences will represent propositions (or thoughts having propositions as their objects), and propositions will represent states of affairs.

We now have the rough outlines of a picture of how mental representations are supposed to represent on the structural account. In general, ideas and concepts are composed of simpler ideas and concepts, in virtue of which they have structures that correspond to the structures of their objects, and propositions are structures that have ideas and concepts as their elements. Finally, perceptions are the particular presentings of ideas, concepts, and propositions; they are not representations in their own right, but can be called representations by courtesy insofar as they are presentings to the mind of these representing contents. There is one problematic case, however, that this account has not addressed: that of primitive ideas and concepts. Leibniz holds that at least some complex or derivative ideas are ultimately composed of primitive ideas, that is, ideas which are not themselves composed of simpler ideas. Indeed, he sometimes indicates that we can grasp an idea only to the extent that we grasp its primitive constituents.³⁹ However, primitive ideas give rise to a special difficulty in connection with representation. We have said that in general, ideas represent in virtue of their structure, which consists in the relations that obtain among their constituent ideas. But primitive ideas by definition do not have constituents; this is why they are also called *simple* ideas. It is unclear, then, in what sense they could have structure. It seems that (at least) one of three conclusions must follow: (1) primitive ideas can have a kind of structure even when they have no constituents; (2) primitive ideas, unlike derivative ones, do not represent, since they lack the requisite structure; (3) representation does not always involve structural correspondence. Of these, (3) seems the most doubtful. Leibniz's discussions of the subject strongly suggest that on his view, *all* representation involves the sort of law of correspondence between the representation and its object that is best understood as consisting in structural similarity. (1) and (2) are slightly more plausible options. In support of (1) we could point to the case of monads, which have structure even though they lack parts. They have a kind of complexity, Leibniz holds, insofar as they have a diversity of modifications. Perhaps in a similar way, simple ideas could have structure in virtue of some kind of multiplicity, even though they lack parts or constituents. I know of no reason to rule out this suggestion, but I know of no textual evidence to support it either. In support of (2) we could point to a

³⁹Cf. [Plaisted 2003](#).

passage in which Leibniz identifies primitive concepts with the attributes of God (L 293).⁴⁰ Perhaps his position is that the divine attributes are not representations, and thus that primitive concepts do not represent. If so, it would present no problem that they lack the sort of structure typical to representing things. This could be what Leibniz has in mind, but as with the previous suggestion, the evidence is very weak at best. Moreover, one wonders how representing concepts could arise through the combination of these primitive concepts, if the latter are only divine attributes. So the case of primitive concepts appears to present a significant and unresolved problem for Leibniz’s theory of representation.

2.4 REPRESENTATION AND INFERENCE

In an important study of Leibnizian perception, Robert [Brandom \(1981\)](#) promotes a rather different understanding of Leibniz’s notion of expression. Whereas I have argued that representation involves structural correspondence, he holds that representation consists in *inference potential*. That is, what makes something a representation, on his view, is that from facts about the representation one can infer the existence of various accidents of the thing represented, where accidents are non-maximal properties of the subject (156; cf. DM §8). From this perspective, it is not structural correspondence *per se* that makes a map a representation of a city, but rather the fact that truths about the city can be inferred from facts about the map, and the same is true for all other cases of representation.⁴¹ Benson Mates endorses approximately the same suggestion, apparently independently of Brandom, though without developing or defending it as fully: “in saying that at any given time the state of each monad expresses the states of all the others, Leibniz is just asserting that, given a complete knowledge of the state of any particular monad at any particular time, a

⁴⁰Cf. what Leibniz says in his remarks on Locke’s opinion of Malebranche: “The Father having said that ideas are representative beings, Monsieur Locke asks (§26) whether these beings are substances, modes, or relations. I believe that we can say that they are only relations, which result from the attributes of God” (G VI 576).

⁴¹In some instances the inferrability may be underwritten by some other feature, such as structural or even one-one correspondence—Brandom gives mathematical expression as one such example (157)—but he apparently thinks representation does not always work this way, so that there is no more fundamental property than this inferrability common to all and only instances of representation.

sufficiently discerning mind could read off the state of any other monad at that time” (1986, 38).⁴²

The strongest and clearest support for this reading can be found in “What is an Idea?” where Leibniz lists a number of examples of expression (models, projective delineations, speech, characters, algebraic equations) and remarks that “What is common to all these expressions is that we can pass from a consideration of the relations in the expression to a knowledge of the corresponding properties of the thing expressed.” Later in the same context he adds that “every entire effect represents the whole cause, for I can always pass from the knowledge of such an effect to a knowledge of its cause” (L 207-8 [13]). In both of these texts Leibniz speaks of “passing” from one piece of knowledge to another, which, as Brandom rightly notes, is best understood as inference (157). Accordingly, the argument goes, Leibniz is claiming that expression involves, indeed consists in, the ability to infer truths about the expressed from the expression itself. He seems to confirm this thought when he writes that “though the idea of a circle is not similar to a circle, truths can be derived from it which would be confirmed beyond doubt by investigating a real circle” (L 208 [13]).

To reason this way, however, would be to misappropriate these texts. For though they clearly establish a close link between expression and inference, a closer look reveals that they provide little support for the thesis Brandom and Mates are concerned to establish: that expression *consists in* inference potential.⁴³ In the first passage, Leibniz claims merely that all the examples of expression he has given have in common this sort of inference potential. He does not say that all expressions have this potential, and moreover he does not say that expressions express *in virtue* of this potential. In the second passage, Leibniz simply affirms that having this inference potential is a *sufficient* condition for something being an expression—he infers from the fact that one can always pass from a knowledge of an effect to a knowledge of its cause the conclusion that “every entire effect represents the whole cause”—but he does not say that it is a *necessary* condition, nor does he suggest or imply that expression consists in inference potential. Strictly speaking, the most we are entitled to conclude from these passages is that many expressions are such that from them we can

⁴²Cf. Bennett 2001, 248.

⁴³Contrast this with the point made in §2.1 in connection with NE 133.

infer truths about their objects.

It is important to realize that Leibniz's "inferentialist" remarks are quite consistent with the structural view of representation I have been defending, as we should expect given that they occur in the same context in which we find his most explicit affirmations of that view (i.e. L 207-8 [13]). From the perspective of the structural view, inferential relations obtain between a representation and its object precisely because of the underlying structural similarity. It is quite true that we can, at least in general, infer truths about an object from its representation. We can infer truths about a city, for example, from a map of that city. But this inference potential is not a primitive feature of the representation in virtue of which we can explain its representational character. Rather, it is merely a by-product of the structural correspondence that obtains between an expression and its object. Leibniz himself seems to indicate as much when he writes: "What is common to all these expressions is that we can pass from a consideration of the relations in the expression to a knowledge of the corresponding properties of the thing expressed. Hence it is clearly not necessary for that which expresses to be similar to the thing expressed, if only a certain analogy is maintained between the relations" (L 207 [13]). In taking the inferential relations between expression and thing expressed to be evidence of structural correspondence ("a certain analogy between the relations"), Leibniz seems to be thinking of that correspondence as the underlying explanation for the obtaining of the inferential relations. If so, then this structural correspondence explains both the representational nature of the expression and its inference potential. Combine this with the fact that a stronger textual case can be made for the structural reading of representation than for the inferentialist one, and we have a good argument for favoring the former over the latter.

We saw in the previous section that ideas of sensible qualities are expressively very rich, even though they appear simple insofar as their complexity cannot be discerned by us. Does this not present another problem for Brandom's view? Given the apparent simplicity of these (sensory) ideas, it would seem that nothing (or virtually nothing) about their objects could be deduced from a consideration of them. For example, one cannot infer anything from a confused (sensory) idea of red about the nature of that quality or the conditions in

which it arises.⁴⁴ Thus, it would seem that on Brandom's view, these ideas could not be said to represent: no inference potential, no expression. Yet Leibniz clearly believes that these ideas have very rich expressive ranges. So, the argument goes, Brandom's view fails.

This objection trades on an assumption that Brandom need not accept: namely, that when he speaks of the potential for inferring facts about the thing represented from the representation itself, he is talking about what we humans are actually capable of inferring in our present condition.⁴⁵ Instead, Brandom could maintain that his position is only that it is possible, in some broad sense of possibility, to deduce facts about the expressed from the expression. We humans face practical limitations that render us unable to make these deductions, but they can still be made, perhaps by God or some omniscient observer. Leibniz is fond of making the point that when it comes a body, though we creatures cannot deduce much about the rest of the universe from a consideration of it, nevertheless "a sufficiently penetrating mind would, in proportion to its penetration, be able to see and foresee in each corpuscle what is happening and what will happen both in that corpuscle and outside it" (NS 111=G IV 557). Similarly, he holds that "each thing is so connected to the whole universe, and one mode of each thing contains such order and consideration with respect to the individual modes of other things, that in any given thing, indeed in each and every mode of any given thing, God clearly and distinctly sees the universe as implied and inscribed" (AG 103; cf. AG 195=G III 403; NE 240). Perhaps something similar could be said about our (sensory) ideas of sensible qualities, following Mates' formulation of the view: though *we* can extract little to no information from them, God or a sufficiently penetrating mind could deduce from them everything there is to know about their objects. If so, then this objection gives us no reason to reject Brandom's inferentialist reading. As we have seen, though, we have other grounds for so doing.

⁴⁴Things are otherwise with distinct (intellectual) ideas of such qualities; see Chapter 5.

⁴⁵Wilson imputes this assumption to Brandom when she criticizes his view for requiring what she calls "internal intensionality"; see [Wilson \(1992, 341–43\)](#).

2.5 CONCLUSION

In this chapter I have argued that on Leibniz's view the phenomenon of representation reduces to a kind of structural correspondence along the lines of isomorphism. I have also tried to shed some light on how various examples of representation involve this sort of correspondence—not only mundane examples such as maps and models, but the more interesting cases of linguistic and mental representation. Along the way, I have noted some tensions and difficulties implicit in Leibniz's view. Deeper exploration of these problems (and others) falls outside the scope of this work, but it should be mentioned in closing that despite these apparent difficulties, many of the essentials of Leibniz's theory of representation seem rather promising and, indeed, have been taken up and defended in recent years by a growing number of philosophers and cognitive psychologists. Among these, a number follow Leibniz (often unwittingly) in maintaining that representation, or at least *mental* representation, involves some sort of structural correspondence; these include such philosophers as Millikan (1984, 1993), McGinn (1989, Ch. 3), Swoyer (1991), and Cummins (1996), as well as psychologists Craik (1967), Palmer (1978), and Johnson-Laird (1983). In addition, recent empirical work on mental imagery has led both psychologists (e.g., Kosslyn (1980, 1994); Shepard & Cooper (1982)) and philosophers (e.g., Tye (1991)) to maintain that such images represent in virtue of structural correspondence. (Recall that for Leibniz images are confused ideas.) Further, Tye (1997) has proposed that despite appearances, pains represent damage to the body, and that they do so in virtue of a structure-preserving mapping between the brain and the damaged part of the body. Apart from the fact that Leibniz would locate pains in the soul rather than the brain, this is a point on which the two philosophers would agree, since Leibniz holds that every pain in the soul represents some state in the brain, which in turn represents (under normal circumstances) some damage to the body. Finally, D. M. Armstrong (1999, 128–31) has argued that our perceptions of color might work in much the same way Leibniz suggests: these perceptions, Armstrong claims, are actually representations of certain micro-physical structural properties, though they are not such as to allow us to analyze the color or to discern its detailed structure. As with Tye, Armstrong's materialism about perception distinguishes his position from Leibniz's, but as

Armstrong himself notes, his proposal is very much in the spirit of Leibniz's views on color perception. Many of the ideas encountered in this chapter, then, are of lasting philosophical and (cognitive) scientific interest.

3.0 DISTINCT PERCEPTION: THE CURRENT SITUATION

The fundamentals of the account for which I have been arguing can be reduced to two claims: (1) Leibnizian representation involves a structure-preserving correspondence between representation and thing represented. (2) Apart from appetitions, Leibniz recognizes two basic kinds of mental phenomena: enduring mental contents or representations, typically ideas, concepts, and propositions, and occurrent perceptions, which are particular presentings of those contents to the mind. I now want to augment this account by taking up and answering what I consider to be the central question of this work: What does Leibniz mean when he calls a perception distinct?

3.1 THE SIGNIFICANCE OF THE ISSUE

In Chapter 1, I mentioned several important Leibnizian doctrines into which the notion of distinct perception figures. I want to begin by revisiting these doctrines and establishing in detail that, and how, they involve the idea of distinct perception. In subsequent sections, I will sketch and criticize the three main accounts of distinct perception currently on offer, and in the next chapter, I will propose and defend my own account.

3.1.1 Individuation of Substances

For Leibniz, the world is, at bottom, an infinity of simple substances the modifications of which are exhausted by their perceivings together with the appetitions that drive them

from one perceiving to the next. This picture naturally gives rise to the question of what differentiates these simple perceivers from one another. If nothing distinguishes them, then by a well-known law they would be identical and Leibniz's infinite world of substances would collapse into Spinoza's one, all-embracing substance. It cannot be that they differ with respect to composition, because being simple, they have no parts. Nor can they differ with respect to what they represent, since they all represent the same thing, namely, everything (DM §15; M §60). Leibniz's solution to this difficulty turns on the thought that monads differ from one another in *how well* they represent things, even though they do not differ in *what* they represent (NS 204). His favorite and most picturesque way of putting the point is to say each monad perceives the same universe from its own unique point of view: "Substantial unities are nothing other than different concentrations of the universe, which is represented in them in accordance with the different points of view which distinguish them" (NS 80; cf. NS 100; L 530). But he occasionally puts the point more precisely and less metaphorically in terms of the unique degrees of distinctness of a substance's perceptions. Thus:

Since God, in regulating the whole, had regard for each part, and particularly for each monad, the nature of which is representative, nothing can limit it to represent only a part of things; though it is true that this representation is only confused regarding the detail of the whole universe, and can only be distinct regarding a small part of things, that is, regarding those things which are either nearer or greater in relation to each of the monads. Otherwise each monad would be a divinity. It is not in the object, but in the modification of the knowledge of the object, that monads are limited. They all go confusedly to the infinite, to all; but they are limited and distinguished by the degrees of their distinct perceptions. (G VI 617 = M §60; cf. MP 176).

When Leibniz says here that monads are "distinguished by the degrees of their distinct perceptions" (*distinguées par les degrés des perceptions distinctes*), I believe he speaks carelessly. On any plausible account of distinct perception, that sort of perception will be denied to some range of monads, either those lacking awareness or those lacking reason. These deprived monads will therefore not be distinguished from one another by the degrees of their distinct perceptions, because none of them will have any such perceptions. Hence, either Leibniz means to be speaking only of certain monads, or he has formulated his view incorrectly. But he explicitly indicates that his claim applies to *all* monads, so we seem forced to accept the latter disjunct. I believe that Leibniz means to say, or at least would have said

had he been more careful, that monads are differentiated by the *degrees of distinctness* of their perceptions, rather than the degrees of their distinct perceptions. This position avoids the difficulty, because all monads have perceptions, and their perceptions can admit of degrees of distinctness even if none of them are on the whole distinct. If this is correct, then Leibniz's idea would be that God, the unlimited monad, perceives everything with maximal distinctness, whereas created monads perceive things more or less distinctly, each in its own way. Thus, with respect to any two monads, there would always be at least one part of the universe that the one perceives more or less distinctly than the other. Each perceiver would differ from all the others, even though they all perceive the same things. But in order to understand this proposal in any detail, we clearly need an account of what it means for a perception to be distinct.

3.1.2 Soul-Body Unity

Leibniz holds that created substances always have a body: "I believe with the majority of ancients that all created spirits, souls, and simple substances are always joined to a body, and that there are never souls entirely separated" (NE 58; cf. G III 509; T §124). We might wonder, however, in what this having-of-a-body or being-joined-to-a-body consists. One natural thought would be that a soul "has" a body in the sense that there is some chunk of matter (the body) with which it interacts in a relatively direct fashion. When the flame touches my body, it causes a particularly pronounced reaction in my soul, whereas the impact on me is far less pronounced when it touches another's body. My body could thus be said to "belong" to me in the sense that there is a particularly intimate causal connection between me, or my soul, and that piece of matter. This, of course, is not a line Leibniz is prepared to accept, since he regards it as inconceivable that soul and body could engage in causal commerce.¹ Another suggestion would be that the unity of soul and body consists in the harmony that arises from their mutual expression of one another. This answer is on the right track, but cannot be right as it stands, because on Leibniz's view a soul represents not only its own body, but *every* body (M §65; cf. AG 76). The mere fact that a substance expresses

¹CA 134=G II 57; NS 17=G IV 483–84; VI 550–51; NE 224; L 587; etc.

the states of its own body does not therefore establish any unique connection between the two, and so that cannot be what soul-body unity comes to in the final analysis.

Leibniz's idea is rather that the intimate nexus consists in the soul's representing its own body *more distinctly* than it represents any other. As he explains in the *Discourse*,

We also see the explanation of that great mystery of the union of the soul and body, that is, how it happens that the passions and actions of the one are accompanied by the actions and passions or rather the appropriate phenomena of the other. For it is inconceivable that the one influences the other, and it is unreasonable simply to appeal to the extraordinary operation of the universal cause in an ordinary and particular thing. But here is the true reason: we have said that everything that happens to the soul and to each substance is a consequence of its notion, and therefore the idea itself or essence of the soul brings it about that all its appearances or perceptions must arise (spontaneously) from its own nature, and precisely in such a way that they correspond by themselves to what happens in the whole universe, *but more particularly and more perfectly to what happens in the body affected by it, because the soul expresses the state of the universe in some way and for a time according to the relation of other bodies to its own. This also allows us to know how our body belongs to us, without nevertheless being attached to our essence.* And I believe that persons who can meditate will judge our principles favorably because they will be able to see easily in what the connection between the soul and the body consists, a connection which seems inexplicable in any other way. (DM §33, emphasis added)

Here as throughout the *Discourse* Leibniz speaks of expression that is “more particular” and “more perfect.” These are other ways of saying that the expression is “more distinct,” as he makes clear elsewhere, such as in this comment from a letter to Arnauld:

But (it will be asked), how does the soul know this ill disposition of the body? I reply that it is not by any impression or action of bodies on the soul, but because the nature of every substance carries a general expression of the whole universe and because the nature of the soul carries, more particularly, a more distinct expression of that which is now happening with regard to its body. That is why it is natural for the soul to mark and know the accidents of its body through accidents of its own. (AG 77-78)

Leibniz therefore endorses what may be called the *priority thesis*: that while every substance expresses the whole universe, each expresses its own body more distinctly than it expresses any other.² On his view, this is all there is to the supposed union of soul and body.³

²Cf. AG 81; L 340; M §62. Adams (1994, 287) finds this thesis to be a point of obscurity in Leibniz's philosophy. I hope to clear things up in §4.3.2.

³Cf. NS 27; L 360. In his correspondence with Des Bosses, Leibniz develops a different theory according to which a “substantial” or “metaphysical chain” (*vinculum substantiale, vinculum metaphysicum*) grounds the unity of soul and body (G II 438-39=AG 199-200). I will not argue so here, but on my view, this theory represents not Leibniz's favored view of the matter but only what he would say if it were the case that “faith compels us to accept corporeal substances” (AG 198).

In trying to understand the priority thesis, we face an additional complication. For that thesis seems to be in tension with another thesis repeatedly affirmed by Leibniz—what I will call the *instrumentality thesis*. According to this doctrine, a monad represents bodies other than its own only *through* or *by* representing its own body. It is not just that the soul simply represents all bodies. Properly speaking, it is the soul’s “own God-given nature to represent to itself, in accordance with its own laws, what happens in its organs” (NS 81; cf. G II 69(ff)). But because of the interconnection of all matter, in representing its organs the soul thereby represents all other bodies: “as this body expresses the whole universe by the connection of all matter in the plenum, the soul also represents the whole universe in representing this body, which belongs to it in a particular way” (M §62). Again, the monad’s nature is “to represent the body that is allotted to it, and *through its instrumentality the entire universe*, in accordance with the point of view proper to this simple substance” (T §291, emphasis added).⁴ This instrumentality gives sense to Leibniz’s claim that “Each soul will represent *proximately* the phenomena of its own organic body, but *remotely* those of others which act on its own body” (MP 176, emphasis added; cf. NS 18). It also helps us to understand his belief that souls “sense what happens outside of them through what happens within them” (G VII 411 = L 711). The thought behind this is that, contrary to what common sense may have led us to think, we do not directly represent objects external to our bodies. Rather, we represent such objects only insofar as they impact our sensory organs. Strictly speaking, Leibniz thinks, the representation I take to be my visual perception of the desk before me is actually a representation of certain states of my eyes, presumably of my retinae.⁵ But because those states themselves represent the desk from a certain point of view, so also does the representation in my soul.

Where is the tension in all this? Consider this rather natural reading of the instrumental-

⁴See also L 340; NS 80, 84-85, 117; MP 176; AG 207.

⁵More recently, E.J. Lowe (1986; 1996, 105) has defended this very same view. See also §41 of Berkeley’s *Essay Towards a New Theory of Vision* (1709): “From what has been premised, it is a manifest consequence that a man born blind, being made to see, would at first have no idea of distance by sight: the sun and stars, the remotest objects as well as the nearer, would all seem to be in his eye, or rather in his mind. The objects intromitted by sight would seem to him (as in truth they are) no other than a new set of thoughts or sensations, each whereof is as near to him as the perceptions of pain or pleasure, or the most inward passions of his soul. For our judging objects perceived by sight to be at any distance, or without the mind, is entirely the effect of experience, which one in those circumstances could not yet have attained to.” See also Adams’s discussion (1994, 287-88).

ity thesis. When Leibniz says that a monad represents the whole world *through* representing its body, the suggestion seems to be that a monad's representations of its body *just are* its representations of the world. That is, I represent the world "through" representing my body because the former expressions are merely instances of the latter ones. If this is right, however, then it is hard to see how a soul's perceptions of its own body could be better or more distinct than its perceptions of the world. For every perception of the world would be a perception of the soul's body. One might try to remove the difficulty by distinguishing between those perceptions of the body that also represent external things (e.g., perceptions of the states of my sensory organs) and those that express only the body (e.g., pains), and then casting the priority thesis as the claim that for any given monad, the latter perceptions will always be more distinct than the former ones. However, this interpretation of the priority thesis simply cannot be squared with what Leibniz says. He consistently claims that every soul expresses its own body more distinctly than it expresses any other, not, as this view would require, that certain of a soul's perceptions of its own body are more distinct than others. The instrumentality thesis therefore seems to conflict with the priority thesis. Yet Leibniz repeatedly affirms both, on one occasion even in the same breath (M §62). We should therefore bear in mind that the priority thesis should be understood in a way that is consistent with some recognizable version of the instrumentality thesis.

3.1.3 Understanding and Sensing

One consequence of the principle of sufficient reason, Leibniz tells us, is that whereas "in the case of bodies everything occurs mechanically, that is, through the intelligible qualities of bodies, namely magnitude, shape, and motion, in the case of souls, everything is to be explained in vital terms, that is, through the intelligible qualities of the soul, namely perceptions and appetites" (MP 173; cf. AG 319). This means, among other things, that the acts of understanding and sensing will need to be explained in terms of a substance's perceptions and appetites, and Leibniz does indeed offer such an explanation. In particular, he holds that understanding consists in distinct perception, whereas sensing is a matter of perceiving confusedly. He writes in the *Theodicy*, for example, that the happenings of the

soul are not “always known by its understanding or perceived distinctly” (T §64 = G VI 137), thus seeming to equate understanding with distinct perception. Similarly, he explains in the *New Essays* that

in my sense *understanding* corresponds to what in Latin is called *Intellectus*, and the exercise of this faculty is called *Intellection*, which is a distinct perception joined to the faculty of reflection, which is not in beasts. Any perception joined to this faculty is a thought, which I do not accord to beasts any more than understanding. So we can say that intellection occurs when the thought is distinct. (NE 173)

He speaks here of both the faculty of understanding (*intellectus*) and the exercise of this faculty, which is *intellection* or the act of understanding. What is most significant for our purposes is that according to this passage, understanding (the act) consists in the having of a distinct thought, which is a distinct perception joined to a faculty of reflection. That is, understanding occurs whenever a substance perceives distinctly. By contrast, sensing has to do with confused perception, as he indicates later in the same work: “the ideas of sensible qualities such as color, flavor etc. (which are actually only images) come to us through the senses, that is to say, through our confused perceptions” (NE 392).

There are other passages in which Leibniz puts both points together. The most explicit comes from a 1699 letter to De Volder: “it is necessary that the soul represent to itself, in order, whatever follows from the laws of the body, some distinctly, others confusedly (namely those which involve a multitude of bodies); the former is to understand, the latter to sense” (AG 173 = L 517). Clearly the suggestion here is that understanding *consists in* the having of distinct perceptions, and sensing in the having of confused ones. In the *Theodicy* we find another text along similar lines: “Our knowledge is of two kinds, distinct or confused. Distinct knowledge, or *intelligence*, occurs in the genuine use of reason; but the senses supply us with confused thoughts” (T §289). In this remark Leibniz identifies distinct knowledge with intelligence, which is equivalent to understanding (T §288). Couple this with the fact that knowledge involves perception and we have another linking of distinct perception with understanding. And as before, he contrasts this case with that of sensing, which involves confused perception (thought being a kind of perception). Also of significance is his claim that understanding or distinct perception “occurs in the genuine use of reason.” Clearly he is signaling a connection between reason and distinct perception, but what exactly

is the connection? I can think of two plausible (and not incompatible) answers. First, ‘reason’ here refers to what Leibniz elsewhere characterizes as the faculty of reasoning, or the faculty by which we apperceive rational connections (*liaisons*) between truths—“connections which themselves constitute necessary and universal truths” (NE 475-76). The *use* of reason therefore involves the apperception of necessary truths. But we can apperceive such truths only if we perceive them, and such perceptions will have to be distinct, since necessary truths can only be known through reflection, which belongs to the understanding (NE 81). It therefore follows, as Leibniz says, that distinct perception will occur in the use of reason. Second, earlier in the *Theodicy*, in the “Preliminary Discourse,” Leibniz had distinguished between that Reason which is merely a linking together of truths, and “pure and bare Reason, distinguished from Experience, which has to do only with truths independent of the senses” (Preliminary Discourse, §1; cf. §23). Thus it could be that in speaking of the “genuine” (*veritable*) use of reason, he means to single out this second kind of reason—reason proper—which is a “linking together of the truths that we know by the light of nature” (*ibid*, §63), that is, of necessary “truths of reasoning” rather than contingent “truths of fact” (M §33). But of course we cannot link such truths together if we do not perceive them, and these perceptions would have to be distinct, since the truths are necessary. So this is another way in which distinct perception would have to occur in the genuine use of reason. Regardless of which of these answers captures Leibniz’s thought, the important point for our purposes is that on his view, reasoning presupposes distinct perceptions (cf. NS 166=G IV 591).

These reflections also allow us to see why Leibniz associates distinct perception with *reasons*, in contrast to confused perception, which relates to *passions* (G IV 576=NS 142; cf. T §51; AG 194). He defines a reason as any well-known truth that is connected with a lesser-known one in such a way that the former commands our assent to the latter (NE 475). Therefore, to grasp a truth as a reason, we must apprehend this connection, which we can only do through a distinct perception or understanding, since on Leibniz’s view this connection is itself a necessary truth. This is also why he thinks understanding “encompasses the knowledge of reasons” (G IV 527).

Commentators have rarely acknowledged these connections between distinct perception and understanding, and between confused perception and sensing. But as these texts clearly

establish, they play an important role in Leibniz's thought.

3.1.4 Freedom and Bondage

Another feature of minds that needs to be explained in terms of their intelligible qualities is their freedom. Leibniz's strategy, similar to the one used in dealing with understanding and sensing, is to reduce freedom and control to distinct perception and the lack of freedom, or bondage, to confused perception. On his view, there is liberty in our distinct thoughts (NS 167), whereas our confused thoughts are always involuntary (NS 103, 117-18, 188, 207; L 577). As a result, "we may say that we are immune from bondage insofar as we act with a distinct knowledge, but that we are the slaves of passion insofar as our perceptions are confused" (T §289). Similarly, since the soul, when in bondage, is a slave to the body in particular, Leibniz can also put the point this way: "The soul gives orders to the body insofar as it has distinct perceptions, and serves it insofar as it has confused ones" (MP 173). Of course, these texts and others like them⁶ strictly speaking establish only that being free or in control *coincides* with perceiving distinctly. There are others, however, in which Leibniz suggests the stronger and more interesting thought that our freedom actually *consists in* the distinctness of our thoughts, and our bondage in their confusedness: "the perfection, force, control, freedom, and action of the soul consist principally in our distinct thoughts" (G IV 574=NS 140); "...there is in [the soul] not only an order of distinct perceptions, which constitutes [*fait*] its control, but also a series of confused perceptions or passions, which constitutes [*fait*] its bondage" (T §64). Likewise, he says that "we are in part in bondage *in the sense that* we depend on other things, and that our perceptions or representations are confused" (G VII 556; emphasis added).

The connection between freedom and distinct thought can also be established in less direct ways. For example, Leibniz frequently indicates that freedom, as he understands it, requires intelligence or understanding in addition to spontaneity and contingency.⁷ Indeed, he considers intelligence to be, so to speak, the "soul of freedom," spontaneity and contingency being merely "the body and the foundation" (T §288). But as we have seen,

⁶NS 166=G VI 591, NS 224-25; T §66

⁷See, e.g.: NE 175; G IV 527; T §§34, 65, 288, 291, 301.

understanding is bound up with distinct perception. So naturally we will be free only when we perceive distinctly. This also follows from Leibniz’s belief that we are free to the extent that we act on the basis of reasons: “Freedom is the same as spontaneity with reason, and to will is to be brought to act through a reason perceived by the intellect” (L 289).⁸ But we cannot perceive something as a reason apart from a distinct perception, because doing so requires perceiving the *liaison* between it and the truth for which it provides a reason, and this *liaison* is itself a necessary truth (NE 475-76). So again freedom is seen to involve perceptual distinctness. By contrast, when we do not act for reasons, Leibniz thinks, we are moved by instincts or swept along by passions. In such cases we are in bondage: “Created minds are free only to the extent they are above passions” (NE 175), for “what bonds and constraint accomplish in a slave is accomplished in us by passions, the violence of which is sweet, but nonetheless pernicious” (T §289).⁹ Yet passions are repeatedly associated with—usually even identified with—confused perceptions.¹⁰ So freedom presupposes perceptual distinctness, whereas bondage is rooted in perceptual confusion.

3.1.5 Action and Passion

Substances appear capable of influencing one another. The malicious thoughts of one person, once communicated, may incite feelings of resentment in another; a physicist’s belief in the existence of neutrinos may move the layman to concur; and so on. Yet Leibniz expressly denies the possibility of such interactions. He has it that such interaction would require some kind of influx from one substance to another, which cannot happen because (i) being simple, these substances have no parts that could be exchanged, and (ii) the accidents of a substance cannot be detached and transferred to another substance (M §7). According to Leibniz, then, substances appear to interact not because they actually do, but because the changes in one always correspond with those in the other, owing to the pre-established harmony. This gives the appearance that they influence one another when in fact they do not, and never could.¹¹

⁸He even holds that “the cause of freedom is reason itself” (Gr 296—check this).

⁹Cf. G VII 110; NS 118; T §§51, 66; AG 194.

¹⁰G IV 574, 576=NS 142; NS 118; L 659=G III 636; NE 166, 210; T §§64, 66, 289; M §49.

¹¹Cf. Leibniz to Isaac Jaquelot: “I have (you say) continuous experience that I move my arm when I want to. But your experience teaches you only that your arm is moved when you want it to be, and nothing more. It does not tell you that it happens by an immediate physical influence of your soul on your arm” (NS 197).

But this cannot be the whole story. For if the denial of inter-substantial causation is to be plausible, we need an explanation not only of why substances appear to interact, but also of why in such interactions we regard certain of the players as causes and others as effects.

The situation corresponds closely to one we have already encountered. Substances are supposed to be incapable of interacting not only with other substances but with their own bodies. That they appear causally connected to their bodies is explained by the harmony obtaining between the two. But the question still arises how to account for the difference between cases in which the soul affects the body (and therefore is free), and those in which it is enslaved to the body. As we have seen, Leibniz proposes to account for this difference in terms of the distinction between distinct and confused perceptions: specifically his idea is that the soul can be considered to act on the body when (and to the extent that) it perceives distinctly, and to be acted upon by the body when (and to the extent that) its perceptions are confused. In somewhat similar fashion, he wants to explain the difference between cause and effect in terms of differences in the degree to which the perceptions of the substances involved are distinct. The general idea is roughly this: when one substance undergoes changes that seem to give rise to changes in another, each will contain an expression of the reason for (or cause of) the changes (both its own and those of the other), and the one that expresses this reason *more distinctly* is the one we consider the cause. Leibniz explains the point this way in a 1686 letter to Arnauld:

...since all created substances are a continual production of the same sovereign being, by the same designs, and expressing the same universe or the same phenomena, they correspond exactly with each other. This leads us to say that one acts upon the other, because one expresses more distinctly than does the other the cause or reason of their changes It is thus, I believe, that the intercourse between created substances must be understood and not as a real physical influence or dependence. (L 337)

And again to Foucher:

But since all substances are continually produced by the sovereign Being, and express the same universe or the same phenomena, they correspond exactly. This makes us say that one acts upon the other, because one expresses more distinctly than the other the cause or reason for its changes, much as we (with good reason) attribute movement to a ship rather than to the sea as a whole. (NS 52)¹²

¹²Cf. MP 79=LC 311; CA 150, 154; M §§49, 52.

There is nothing more to being a cause, from this perspective, than representing the reason for a thing's change more distinctly than it is represented by something else. Inter-substantial causation therefore provides a third example of something occurring in a substance that gets explained in terms of the monad's intelligible qualities, specifically in terms of its perceptions.

It should be mentioned that evidence can be found in Leibniz's writings for another account of causation. In summarizing §15 of his *Discourse*, he claims that "The action of one finite substance on another consists only in the increase of degree of its expression together with the diminution of the expression of the other" (G II 13; cf. DM §15; AG 76). And he expresses much the same view almost twenty years later in the *New Essays*: "But taking 'action' to be an exercise of perfection, and 'passion' to be the contrary, there is action in true substances only when their perception (for I grant it to all of them) is developed and becomes more distinct, just as there is passion only when it becomes more confused" (NE 210). Despite the similarities in this theory and the one discussed above—both employ the notions of degrees of perceptual distinctness, for example—they seem to involve, at first blush at least, quite different proposals. Most notably, it seems at least in principle possible for the substance with the more distinct expression of the reason for its change to be the one whose expression is becoming more confused; likewise the expression of the other substance, while more confused, could be in the process of becoming more distinct. But if either of these possibilities ever obtains, then the two accounts would yield different extensions for the concepts *cause* and *effect*, and hence would constitute different, incompatible theories of the nature of causation.

Another possibility, in some ways more satisfying, is that what we have here is not expressions of different theories, but diverse expressions of a single theory. In support of this suggestion we can point to §15 of the *Discourse*, wherein Leibniz appears to endorse both theories together. He remarks that "we attribute to ourselves, to our advantage and with good reason, the phenomena that we express more perfectly, and we attribute to other substances that which each expresses the best." But then he goes on to say, just a few sentences later, that "when a change takes place by which several substances are affected (in fact every change affects all of them), I believe we may say that the substance that immediately passes to a greater degree of perfection or to a more perfect expression exercises

its power and *acts*, and that the substance that passes to a lesser degree shows its weakness and *is acted upon*.” At the very least this gives us reason to think he viewed these statements as compatible, and as expressions of a single (not necessarily consistent) position. At the same time, however, it is not at all clear how to reconcile them. Again, what needs to be explained is why the substance with the perception of increasing distinctness is bound to be the one with the more distinct perception, and conversely why the the perception of decreasing distinctness will always be the more confused one. To my knowledge, Leibniz never adequately addresses this point, and it would take us too far afield to investigate the matter in sufficient detail. I therefore propose to bypass this issue by putting the suggestion about increasing and decreasing distinctness to one side and focusing instead on the more prominent idea that the cause is that which has the more distinct expression of the reason for its change.¹³

Leibniz consistently advertises the account under discussion as a theory specifically of interaction between *substances*, or *monads*. But what about bodies, which are not substances but their phenomena? Do they genuinely interact with one another? And if not, what sort of account does he propose to give of the difference at the level of phenomena between causes and effects? In a draft letter to Arnauld he discusses the case of a body moving through water, and apparently causing the water to move accordingly. About this he says: “although this body is not an efficient physical cause of these effects, its idea is at least, so to speak, the final cause, or, if you prefer, exemplar of them in the understanding of God” (CA 151). This is because in such cases “the change is attributed to that body by means of which the whole is most distinctly explained,” and assuming that the body moves the water, rather than the other way around, allows us to “explain distinctly what happens” (CA 150). This sounds a great deal like Leibniz’s take on inter-substantial causation, in the first place because he seems to be denying any real interaction between bodies, and second because that body is considered to act which provides the more distinct explanation for the changes. However, the preponderance of evidence suggests that he does not want to deny genuine interaction among bodies.¹⁴ In the presentation of his “New System,” for example, after explaining the

¹³Cf. the treatments of this view in [Kneale 1972](#) and [Brandom 1981](#).

¹⁴Arguments for this conclusion can also be found in [Miller 1988](#).

theory of substantial action predicated on differences in degree of perception, he goes on to remark:

...the action of one substance on another is not an emission or a transplantation of an entity as is commonly thought, and it can be reasonably understood only in the way I have just described. It is true that we can easily understand in connection with matter both the emission and receiving of parts, by means of which we quite properly explain all the phenomena of physics mechanically. But a material mass is not a substance, and so it is clear that action as regards an actual substance can only be as I have described. (NS 20)

The suggestion clearly seems to be that bodies, unlike substances, are capable of genuine interaction. He points up the same contrast again several years later in a letter to De Volder: “I do not admit any action of substances upon each other in the proper sense, since no reason can be found for one monad influencing another. But in appearances composed of aggregates, which are certainly nothing but phenomena (though well-founded and regulated), no one will deny collision and impact” (L 530).¹⁵ In other texts Leibniz speaks in more specific terms about the nature of the influence one body exerts on another. Although he holds that “in the collision of bodies each suffers only through its own elasticity, caused by the motion that is already in it” (G IV 486=NS 20; cf. G IV 476=NS 26), he also believes that another mass is always needed to “set the elasticity working” (L 269), or to give “determinate direction to the force already existing” in the other (L 530). Thus, although there is properly speaking no transfer of force in bodily collisions, there is a kind of physical interaction inasmuch as the one mass affects the direction of the force already existing in the other.

Bodies are therefore capable of genuine interaction, and this means that corporeal action, unlike substantial action, need not be cashed out in terms of anything like distinct perception. Nevertheless, Leibniz does think that distinctness is relevant to the issue of corporeal action in another way, epistemological rather than metaphysical. For he holds that though bodies can truly interact, we are never in a position to know with mathematical certainty which bodies are active and which passive because of the equivalence of all hypotheses concerning motion (DM §18; AG 91, 131, 308; NS 20). His favorite example concerns the boat moving through water. As he never tires of pointing out, we cannot strictly *prove* whether the boat is pushing the water, causing it to move into the space formerly occupied by the boat

¹⁵Cf. NS 199; NE 60, 210-11; G III 505; AG 120(=L 437), 137, 336.

as it moves along, or, to the contrary, whether the water is pushing the boat, which then moves into the space vacated by the water (or some combination of the two). This does not mean that no fact of the matter obtains concerning which thing acts, just that we cannot demonstratively know that fact. We can nonetheless know which one is acting on the basis of considerations of simplicity, which Leibniz equates with distinct explanation. In the case at hand, there are an infinity of possible hypotheses. One would be that the boat pushes the water, another that the water moves the boat, and the rest some combination of these two. According to Leibniz, we should and do regard that hypothesis as correct which provides us with the simpler and more distinct explanation of what happens, and that hypothesis will be the one that portrays as the cause the thing that expresses most distinctly the reason for the changes, that is, the thing from the state of which that reason is most easily given (MP 79=LC 311; CA 150-51; cf. NS 20, 26). Hence, though bodies are genuinely capable of action, still in the *assigning* of action to them the situation is quite similar to that arising in connection with the apparent action of substances. What this means is that if we can arrive at an account of distinct perception that sheds light on the nature of substantial interaction, then we should thereby gain some insight into the epistemological side of Leibniz's theory of corporeal action.

3.1.6 Two Miscellaneous Doctrines

For the sake of comprehensiveness I want to mention two other doctrines that have a bearing on an account of distinct perception, but which I will largely be ignoring. First, Leibniz holds that (at least some) monads can have an organic body consisting of an infinity of monads each of which it dominates (cf., e.g., PNG §3), and in a letter to Des Bosses he indicates that this sort of monadic domination relates to degrees of perfection: "But domination and subordination considered in the monads themselves consist in nothing but degrees of perfection" (G II 451). But we know from elsewhere that a monad's degree of perfection is a function of the degree to which its perceptions are distinct. Hence, monadic domination and subordination, Leibniz seems to be claiming, are merely a matter of differences in degree of perceptual distinctness. Unfortunately, this is all he says on the matter. Apparently the

idea is that a dominant monad has more distinct perception than any of its subordinate monads; yet this cannot be the whole story, for if it were then a dominant monad would dominate *any* less perfect monad, and not just those that compose its body. This is an interesting issue, but I will not be pursuing it any further.¹⁶ In view of the fact that the connection between monadic domination and perceptual distinctness is not one Leibniz either emphasizes or explains, we can justifiably ignore this connection in developing our account of distinct perception.

The second doctrine concerns spatial relations such as *x is near y* and *x is farther from y than from z*. We have already seen that Leibniz gives accounts of such varied phenomena as understanding, freedom, and causation in terms of distinct perception. But there is some reason to think he is also prepared to cash out such spatial relations in terms of degrees of perceptual distinctness. In the first place, one of his general metaphysical aims is to reduce everything to monads and their modifications. His view is that “there is nothing in things but simple substances, and in them, perception and appetite” (AG 181); accordingly he “reduces everything to monads, or to simple substances and their modifications” (G VI 590=AG 265; cf. AG 181). This seems to require that not only bodies but the spatial relations obtaining among them be reduced in some way to monads and their modifications. And in one text, Leibniz seems to be suggesting just such a reductive strategy: “distance and the degree of distance involve also a degree of expressing in the thing itself a remote thing So, in fact, situation really involves a degree of expressions” (MP 133).¹⁷ He does not explain the strategy in any further detail here or elsewhere, but the thought seems to be something along the following lines. Suppose we have three monads, *Alpha*, *Beta*, and *Gamma*, together with their bodies, B_α , B_β , and B_γ , and suppose B_α is nearer in space to B_β than it is to B_γ . B_α 's relative proximity to B_β can be thought to consist in *Alpha*'s perceiving *Beta* relatively distinctly, since as we shall see shortly, a monad perceives best (*ceteris paribus*) that which is closer or more closely related to it (or its body). Similarly, saying that B_α is nearer to B_β than to B_γ could be viewed as tantamount to saying that *Alpha* represents *Beta* more distinctly than it represents *Gamma*. And B_α 's having a certain

¹⁶For more on monadic domination, see [Adams 1994](#), 285–91 and [Look 2002](#).

¹⁷Cf. Rescher [1986](#), 84–86; [1991](#), 211, 218; [Wilson 1992](#), 339.

location could perhaps be spelled out as *Alpha*'s having a certain distinctness profile. In some such way, it might be possible to reduce all spatial relations to relations of relative perceptual distinctness. As with monadic domination, however, Leibniz neither emphasizes nor explains this reduction, and so I will largely ignore it in developing a theory of distinct perception.

3.1.7 Five Desiderata

The upshot of this section is that the concept of distinct perception figures centrally into a number of important Leibnizian doctrines. These doctrines thus provide the following desiderata for an account of distinct perception:

1. The account should explain how each monad can differ from all the others in its perceptions even though they perceive all the same things.
2. The account should explain the nature of soul-body unity by giving sense to the priority thesis, while reconciling that thesis with the instrumentality thesis.
3. The account should shed light on the proposed reductions of understanding to distinct perception and sensing to confused perception.
4. The account should explain why Leibniz associates freedom with distinct perception and bondage with confused perception.
5. The account should explain the connection between activity and the relatively distinct perception of a reason.

As I evaluate theories of distinct perception in the remainder of this chapter and in the next, I will be judging them (at least in part) on the basis of how well they satisfy these desiderata.

3.2 DISTINCTNESS AS INVOLVING AWARENESS

Not many commentators have expressed themselves clearly on this issue, but of those who have, most think that when Leibniz calls a perception distinct, he is affirming that it is *noticed* (“apperceived”), or at least *noticeable*.

The difference between distinct and confused perceptions corresponds exactly to that between perceptions of which we are conscious or which we apperceive and those of which we are not conscious or which are not apperceptible. It corresponds to that between sensible perceptions and insensible perceptions. (McRae 1976, 36)

[Leibniz] does seem to think that a confused perception, which is one of an infinity of perceptions that a percipient has at a given time, cannot be noticed. However, since what cannot be noticed certainly is not noticed, a confused perception may be regarded as a type of little perception A distinct perception is contrasted with a confused perception as just defined: that is, with a perception that is not noticed, and that indeed (it appears) cannot be noticed. (Parkinson 1982, 7)

...to say that a perception is distinct is to say that it is *distinctive*, that it *stands out* against the sea of perceptions co-present with it in the soul. . . . To say that sensations are distinct perceptions is therefore to say not that they are noticed, nor that they are noticings, but that they are *noticeable* or *apt* to be noticed. (Simmons 2001, 57–58).

The classic, and (to boot) best developed, version of this perspective is due to Montgomery Furth (1967), whose position I will now consider in some detail.

Furth's launching point is a query into the literal meaning of Leibniz's talk of points of view. Citing the remark that a (created) monad's perceptions "can only be distinct for a small portion of things, that is, either for those that are closest, or for those that are greatest with respect to each monad" (M §60), he reasons that a monad's point of view on the world must consist in its perceiving some chunks of the universe "clearly" or consciously, while perceiving the rest only unconsciously, because the things closest and greatest with respect to sentient beings such as ourselves are generally those things of which we are most conscious. (Failing that, we can at least say that when it comes to things external to our bodies, the more closely we are related to them, the more *likely* we are to notice them.) By contrast, God perceives all things consciously, which is what we would expect given Leibniz's claim that God perceives the whole world distinctly (NS 118, etc.). Furth therefore concludes that "The numerical diversity of harmonious monads can reside only in differences in the clearness or degree of consciousness with which they experience various portions of their universe(s); if Leibniz's talk of 'perspective' comes to anything, it must come to this" (129). Accordingly, since each monad is supposed to have its own distinctive point of view, which distinguishes it from any other substance, it must therefore have a unique distribution of degrees of

consciousness over its perceptions.¹⁸ From this perspective, substances are distinguished not by *what* they perceive, since they all perceive the same things, but by the *way* they perceive them, in the sense that each has a unique profile of more or less conscious perceptions.

One complication here is Furth's tendency to speak of degrees of clarity or clearness whereas Leibniz himself consistently speaks of degrees of *distinctness*. This divergence could be supposed to result from the influence of mistranslations of *distincte* as 'clear' and *distinctement* as 'clearly', of which there are a disturbing number of examples.¹⁹ But this does not seem to be the case, since Furth himself correctly quotes Leibniz as holding that monads are "distinguished by the degrees of their distinct perceptions [*perceptions distinctes*]" (M §60). The explanation is more likely that Furth views 'degrees of clarity' as another name for degrees of consciousness, in which case he would not be guilty of inadvertently conflating clarity and distinctness; he would be self-consciously identifying the two. That is, his position would be precisely the claim that degrees of distinctness *are* degrees of clarity or consciousness. Whether or not that is right, what is most important for our purposes is that he has at least *committed* himself to the view that degrees of distinctness are degrees of consciousness, because he has the latter doing work that Leibniz delegates to the former.

Given that Furth's position on the nature of perceptual distinctness is developed specifically in response to the question of what distinguishes one monad from another, one might expect that its ability to answer this question plausibly would be one of its special strengths. In fact, however, this turns out to be a major weakness of the theory, at least as originally formulated. As [Brandom \(1981\)](#) points out, the view may succeed in explaining what differentiates one *sentient* monad from another, but it fails to address the equally important issue of the individuation of the so-called "bare" or "simple" monads.²⁰ Like souls, these monads perceive the entire universe; but unlike souls, they are never capable of awareness, and so all of their perceptions have a degree of consciousness of zero. This means that bare monads

¹⁸Furth recognizes (correctly) that, strictly speaking, a monad is conscious of the world only through being conscious of its perceptions of the world ("They perceive what passes without them by what passes within them": L 711). So his view, more precisely, is that a monad has more distinct perception to the extent that it is conscious of more of its *perceptions* of the world.

¹⁹See L 340; NS 131-32; Huggard 365(=T §403)

²⁰Leibniz usually uses the term 'simple' to mean "without parts," in which case it applies to monads generally. Sometimes, however, he uses it to mean "without awareness," in which case it applies only to a proper subset of monads.

will have exactly the same distribution of degrees of consciousness over their perceptions, in which case such distributions cannot be the basis for their numerical diversity.²¹

This is a damaging objection, but not an insuperable one. Answering it, or rather obviating it, requires a slight but significant adjustment to Furth's official position, one that preserves the spirit of his view while making it possible to speak of degrees of distinctness even in the perceptions of monads incapable of apperception. What I have in mind, in short, is a shift in focus from consciousness itself to the qualities of a perception in virtue of which it is suited to serve as an object of consciousness. I will explain this in more detail, but first we need some background.

Leibniz holds that we apperceive perceptions just in case they have the property of being sufficiently *distinguished*.

... we think of a number of things all at once, but we attend only to the thoughts that are more distinguished [*distinguées*]. (NE 113)

We are never without *perceptions*, but it is necessary that we are often without *apperceptions*, namely when there are no distinguished [*distinguées*] perceptions. (NE 162)

We see from this that if we had nothing distinguished [*distingué*] and, so to speak, heightened and of a stronger flavor in our perceptions, we would always be in a stupor. And this is the state of totally bare monads. (M §24)²²

Intuitively speaking, a perception is distinguished to the extent that it is “heightened,” “remarkable,” or “notable”—in short, to the extent that it stands out against its background. A perception can fail to stand out, in the first place, if there are many other perceptions occurring at (roughly) the same time. As he explains to Henri Basnage de Beauval, “In each substance there are traces of everything that has happened to it, and of everything that is going to happen. But this infinite multitude of perceptions prevents us from distinguishing them, just as I cannot distinguish one voice from another when I hear the loud and confused noise of a crowd” (NS 83).²³ At any point in time, Leibniz is saying here, there are in substances such as myself an infinity of perceptions of things that have happened to me and

²¹Note to be added here about other objections from Brandom and Wilson, about how I think these objections miss their target and that I address them implicitly at a later time.

²²Examples could be multiplied: L 557; NS 77-78, 140; NE 55, 112, 173; G III 307, V 16, 24, VI 516; PNG §4; M §20.

²³Cf. AG 81; L 513, 557; NS 166 = G IV 591; NE 53, 134; T §356; G III 508.

things that will happen to me, though the great number of these perceptions prevents them from being sufficiently distinguished to be noticed. Another factor that often prevents a perception from being noticed, and which usually works together with that of multiplicity, is the property of being too “small” (*petite*) or of having insufficient strength or magnitude.²⁴ Thus, just as we cannot distinguish the individual voices in the noise of the crowd because there are too many of them, we also cannot distinguish them because none of them is loud enough (relative to the others) to make a very distinguished impression on our sense organs. If there were relatively few voices contributing to the noise, or if one of them were loud compared to the others, we would indeed be able to notice (or apperceive) the individual voice. Yet another factor that contributes to perceptions being undistinguished is that of uniformity. For example, if we have a long series of relatively uniform perceptions, we can fail to be aware of them because of familiarity, just as the person who lives near a waterfall ceases to notice the sound it makes, because the impressions it makes on our soul “lack the appeal of novelty” (NE 53-54).²⁵ We can summarize these points by saying that a distinguished perception is one that is distinctive enough, relative to preceeding, succeeding, and contemporaneous perceptions, to be noticed.

Now to the proposed adjustment. Suppose Furth were to construe perceptual distinctness, following [Simmons \(2001\)](#), not as the property of being an object of awareness but rather as that of being sufficiently distinguished. This modified position would preserve what he takes to be his central insight, namely, that our distinct perceptions are the ones of which we are aware, and the confused perceptions the ones of which we are unaware. But it would also provide him with the resources to answer Brandom’s objection. For though bare monads are all equally unconscious of their perceptions, their perceptions can still be more or less distinguished. One bare monad, for example, could have a more distinguished perception of some chunk of the universe than any other does, though of course this more distinguished perception would not be on the whole very distinguished, that is, distinguished enough to be noticed. But it would still be more distinguished than the corresponding perceptions of other bare monads. In much the same way, one faint sound can be louder than

²⁴Cf. G VI 514ff (check); NE 164; NS 78, as well as many of the references in the previous note.

²⁵Cf. L 339-40, 557-58; G VI 514ff.

another, or one cheap piece of jewelry more expensive than another. Understood in this way, even bare monads would have unique distinctness profiles.

Another strength of this modified version of Furth's view is that in a number of texts this seems to be precisely what Leibniz has in mind.²⁶ In a published reply to Bayle's criticisms of the system of pre-established harmony, for example, Leibniz remarks that "people have thought that confused thoughts differ *toto genere* from distinct ones, whereas they are only less distinguished and less developed because of their multiplicity" (NS 117). He appears to characterize distinct thoughts as remarkable perceptions when he says that in death "the cessation of the functions of the soul is only apparent, because there are no remarkable perceptions," and that it is a great source of errors to take "the cessation or rather suspension of distinct thoughts for a cessation of all thoughts" (G VI 516). Similarly, he claims that "death is nothing other than the state of very confused perceptions, which differs only more or less from the state we find ourselves in when we sleep without having dreams that we can remember, or when we have some fainting spell in which our sensation is taken away" (G III 521). Bearing in mind that we fail to remember and are without sensation when our perceptions are not sufficiently remarkable, the suggestion in these passages is clearly that a distinct thought is a distinguished one, whereas a confused thought is one that is not distinguished.²⁷

Taking 'distinct' to mean 'distinguished' therefore gives us an account which sorts well with a number of Leibniz's remarks, and gives us a plausible understanding of his claim that monads are differentiated by the degrees of distinctness of their perceptions. How does the account fair with respect to the other doctrines involving distinct perception? It is unfortunate that its proponents have never addressed this question themselves. As far as I can tell, the view does not conflict with anything Leibniz says on the issues of soul-body unity, and substantial activity. And in fact, I am prepared to grant as much for the sake of argument. Even so, I want to argue that any view on which perceptual distinctness coincides with awareness is bound to have some significant limitations.

²⁶The texts that Furth himself quotes in support of his reading are actually neutral between his view and the one I will be defending below.

²⁷For other texts suggestive of this view, see NE 117; 165-66; NS 102-3; G V 23-24. In §4.3.6, I will be arguing that in these texts Leibniz is speaking carelessly and inaccurately.

Doubts about the present view begin to creep in once we realize that many texts explicitly contradict it. For example, Leibniz believes that innate ideas and truths “would sparkle continuously in the understanding, and would give warmth to the will, if the confused perceptions of the senses did not monopolize our attention” (NE 100). Also, on his view “Confused thoughts often make themselves clearly sensed, but our distinct thoughts are ordinarily clear only potentially: they could be so, if we would apply ourselves to penetrating to the sense of words or characters” (NE 186-87). Clearly the confused perceptions mentioned in these passages are rather distinguished, for otherwise they would be *petites perceptions* and would neither monopolize our attention nor be clearly sensed. In addition, Leibniz repeatedly characterizes perceptions of various sensible qualities as confused. For example, he speaks of hearing “the loud and confused noise of a crowd” (NS 83), and he holds that perceptions of heat and color (MP 77=LC 309, et al.), of pain (NS 166=G IV 591), and of the “pleasantness or unpleasantness which we find in consonances or dissonances” (NS 105) are all clear but confused. In each of these cases Leibniz is calling some rather distinguished perception confused, and so in these contexts ‘confused’ presumably does not mean ‘undistinguished’; but then the sense of ‘distinct’ opposed to this sense of ‘confused’ must not be that of ‘distinguished’. In these texts at least, he appears to have something rather different in mind.

More serious problems emerge when we consider how the view fares in connection with Leibniz’s linking of understanding and freedom to distinct perception. In the first place, the distinction between understanding and sensing does not at all map onto the distinction between distinguished (sensible) and undistinguished (insensible) perceptions. While understanding no doubt always involves a distinguished perception, it is far from true that our sense perceptions are always undistinguished or unconscious. Indeed, our sense perceptions are often among the most distinguished that we have. This is precisely the point being made in the *New Essays* passages quoted in the previous paragraph. Hence, it cannot be that in his discussions of understanding and sensing Leibniz takes ‘distinct’ to mean ‘distinguished’, and ‘confused’ to mean ‘undistinguished’. In addition, Leibniz holds that we are free just in case we perceive distinctly, and in bondage (to the body or to bodies) when our perceptions are confused. But we are decidedly not free in all cases where our perceptions are distin-

guished, or such as to be noticed, since our conscious experiences often come to us unbidden. For example, if I am experiencing an intensifying pain, I am having a series of perceptions in which the progression from one to the next is not something that I will to occur. Yet these perceptions are all rather distinguished.²⁸ So it is not the case that I am free just in case I have distinguished perceptions. Indeed, if this were the case, then no one would ever have the experience of being in bondage. Leibniz must not therefore mean to suggest that distinctness is just the property of being distinguished.

Of course, these shortcomings do not conclusively doom the view that perceptual distinctness coincides with awareness. That view does not tell the whole story, but it may still be *part* of the whole story: it may be that no single sense of perceptual distinctness can accommodate all of Leibniz's claims on the subject, in which case the present account may be needed to explain some parts of his view, while others account for what he says about understanding and freedom. If that turns out to be the case, then nothing I have said casts any doubt on this view, except insofar as it purports to provide us with a complete account. However, if it proves possible to give a single account of distinct perception that delivers everything (or almost everything) we could hope for from such an account, then that account would be highly preferable to the present view. In Chapter 4, I will be developing and defending just such a unified account, and if I can do so successfully, then I can justifiably reject the present view. But for now we must settle for this conditional conclusion: If a plausible unified account of distinct perception is possible, then any view on which distinctness involves awareness will have to be judged unacceptable.

3.3 DISTINCTNESS AS INFERENCE POTENTIAL

By far the most subtle and best developed theory of distinct perception to date is due to [Brandom \(1981\)](#). He discerns not one but three (closely related) senses of perceptual distinctness, which conspire to “enable one to explicate all of Leibniz’s pronouncements concerning

²⁸Leibniz explicitly acknowledges both that feelings of pain are notable (NE 113) and that they are involuntary (G IV 579=NS 153, 591=NS 166).

distinctness of perceptions” (175). I will be evaluating this claim later (§3.3.3), but first let us consider these senses of distinctness in turn, beginning with the most fundamental.

3.3.1 The Leading Idea

As we saw back in §2.4, Brandom favors a reading of Leibnizian representation on which A represents B in virtue of A 's being such that from a consideration of its states we can infer truths about the accidents (non-maximal properties) of B . In virtue of this inferrability, we can say that A 's modifications “enfold” the states or accidents of B , inference being a matter of recovering this information about B from the facts about A in which they are encoded. Thus, in the case where A is a simple substance, its representations will enfold multitudes of accidents in a *unity*, and therefore will constitute *perceptions*.

This inference-centered account of perception naturally suggests a certain view about the nature of perceptual distinctness and the sense in which it admits of degrees. For notice that perceptions, which enfold the accidents of one thing in another, can enfold more or fewer accidents. Plausibly enough, a perception expressing more accidents could be construed as better or more distinct, since it would allow us to deduce more truths about its object. This correlates with Leibniz's claim that perfection consists in the optimization of variety and simplicity—in effect, in doing the most with the least. Just as our world is the most perfect because it is the simplest in principles yet the richest in phenomena (DM §6), so on this view our perceptions are more perfect to the extent that fewer of them are required to express the same infinite detail of the world. By contrast, perceptions enfolding fewer accidents would have less inference potential and would therefore be less distinct (i.e., more confused). In this way, Brandom interprets degrees of distinctness as degrees of content enfolded, or of expressive richness, and degrees of perceptual distinctness in particular as a matter of “more-or-less-in-one” (163).

There is a complication, however. Understood in just this way, Brandom's view does not allow for differences in degree of distinctness among infinitely complex perceptions, since no two perceptions of this sort will express more or fewer accidents than any other. This is a significant shortcoming because Leibniz seems to hold that our sense perceptions, though

admitting of degrees of distinctness, are infinitely contentful. For instance, he has these perceptions in mind when he says that confused thoughts “always envelop the infinite” (NS 117; MP 77=LC 309). Further, he believes that perceptions of composites are always composed of the smaller perceptions of all the actual parts of their objects (AG 229). Given that material things are infinitely divided, then, our perceptions of them will always enfold an infinity of accidents. Yet these perceptions will be distinct to varying degrees, as when one perceives a nearby object more distinctly than a remote one. An account of distinct perception should therefore allow for differences in degree of distinctness among infinitely rich perceptions.

In full awareness of this difficulty, Brandom offers this alternative formulation of his position: one perception is more distinct than another just in case the expressive range of the former is a *superset* of that of the latter. This removes the difficulty, because the content of one representation can properly include that of another even if both representations enfold an infinity of accidents, in the same way that the set of natural numbers properly includes the set of odds. At the same time, this move to accommodate the infinite suggests that Brandom’s talk of distinct perceptions enfolding *more* accidents, and his characterization of degrees of perception as more-or-less-in-one, are only heuristics. For suppose P_1 enfolds an infinity of accidents, while P_2 is more distinct than P_1 . By definition the expressive range of P_2 properly includes that of P_1 , but by no means does P_2 encode *more* information than P_1 , anymore than there are more numbers in the set of integers than in the set of evens. Properly speaking, Brandom’s view is not that the more distinct perception enfolds *more* accidents than the less distinct one, but only that the former enfolds all the accidents of the latter and more. One seemingly odd consequence of this is that a perception representing O as red, shiny, and heavy would not be more distinct than one that only represents O as cubical, despite the fact that it encodes more information. However, if we regard the talk of expressing more accidents as merely heuristical, and replace it with talk of more inclusive expressive ranges, then we will no longer be tempted to view the former perception as more distinct than the latter.

This inference potential model receives support from a number of passages in which Leibniz links perceptual distinctness with inference or reasoning. We saw back in §3.1.3 that

in the *Theodicy* he associates distinct knowledge with “the genuine use of reason” (T §289). Brandom’s view explains this remark nicely, insofar as it construes distinct knowledge as involving perceptions from which much can be deduced through the use of reason. Similarly, we read in the *New Essays* that our confused impressions of sensible qualities such as colors and tastes “serve to give us *instincts* and to ground observations of experience rather than to furnish matter for the reason, except insofar as they are accompanied by distinct perceptions” (NE 487). On the view under discussion, these latter perceptions can be said to furnish us with matter for the reason in the sense that they enfold many accidents which can then be deduced from a consideration of them. Finally, Leibniz holds that “if the state of any entity is known perfectly, then the state of any other entity can be inferred infallibly” (ML 412),²⁹ and likewise that “the more perfectly I perceive one thing, the better I come to know many properties of other things from it” (AG 103; cf. NE 261). These texts not only evince a link between distinctness and inference, they establish the stronger thesis that a perception is more distinct to the extent that it has greater inference potential. Brandom’s idea, in essence, is that degree of distinctness and inferential richness are correlated in this way because they are one and the same.

The primary strength of Brandom’s account is not supposed to be its textual basis, however, but its considerable explanatory power. We do not yet have the entire account before us, but we can already appreciate some examples of its potential for explaining various of the Leibnizian doctrines involving distinct perception. First, according to the theory, when Leibniz asserts that monads differ not with respect to what they perceive but how distinctly they perceive it, he has in mind this first sense of distinctness. The key here is this: though monads all perceive the same things, each can divide up the expressive labor among its perceptions in unique ways. When Leibniz says that each monad perceives the entire universe, what he means, according to Brandom, is that the existence of every accident of every thing in the universe can be inferred from a consideration of the perceptions of any given monad, or in other words that the perceptions of a given monad together express the complete set of accidents of the universe. However, not all monads will require the same number of perceptions in order to represent this set of accidents. More perfect beings will

²⁹Sleigh’s translation (1990b, 171).

express the entire universe in “fewer” perceptions, whereas less perfect ones will require “more” perceptions to do the same expressive work. (More exactly, the more perfect a being the more inclusive its perceptions will be.) In the limit, that is, God, the entire universe would presumably be expressed in only a single, maximally inclusive perception. But created beings would need many perceptions—presumably an infinity of them—in order to express the same content, and these perceptions will be more or less inclusive to the extent that the substance is more or less perfect. Further, even beings perfect to the same degree could differ in their perceptions, because though they would require the same total number of perceptions, their perceptions could divide up the expressive work in different ways. In one monad, for example, there might be a single perception expressing accidents $a_i - a_j$ of some object, whereas another, equally perfect monad requires multiple perceptions to represent those same accidents. In this way, Brandom’s account explains in plausible fashion how monads can be differentiated by their perceptions even though they all perceive the same things.

Concerning Leibniz’s account of activity, Brandom advertises as a cardinal explanatory virtue of his theory that it explains the connection between two alleged features of causes: that they represent more distinctly than effects, and that they provide *a priori* reasons for their effects (161-62). I find his reasoning at this point somewhat obscure, but the basic idea seems to run as follows. Suppose we have substances A and B , and that with respect to some change a , A is considered active and B passive. According to Leibniz’s analysis, this will mean that A ’s perception of a (call it P_A) will be more distinct than B ’s (P_B). And therefore within the framework of Brandom’s view, P_A will be inferentially stronger than P_B ; that is, the former will have a more inclusive expressive range than the latter. Hence, everything deducible from P_B will be deducible from P_A , and indeed P_B itself will be deducible from P_A . P_A will therefore provide a reason for P_B in the same way that the premises of an argument provide a reason for the conclusion derived from them.³⁰

³⁰Here is an alternative presentation that follows Brandom’s own more closely: Suppose we have substances A and B , considered at time t . Let m be a state of A , that is, a set of perceptions, and let m' be such a state of B . Also, let a be some change through which several substances are affected. (More exactly, we can think of a as a temporal sequence of accidents the occurrence of which constitutes the change in question.) Now with respect to a , we can say that m is active and m' passive just in case m represents a more distinctly than m' does. Further, we can say that m expresses a more distinctly than m' does if and only if there is a subset $k(m)$ of m that fully expresses a and is *inferentially stronger* than any subset $k(m')$ of m' that

Whether or not it accurately depicts Brandom's thought, this argument faces several difficulties. First, the move from "Everything deducible from P_B is deducible from P_A " to " P_B is deducible from P_A " appears invalid. Suppose P_A represents object O as red, cubical, and heavy, while P_B represents O only as red and cubical. In that case, everything deducible from P_B would indeed be deducible from P_A . For example, one could deduce from P_B that O is red, that O is cubical, and that O is not spherical; and all these things could be deduced from P_A as well. But P_B itself, that is, B 's representing O as red and cubical, would not be deducible from P_A , and consequently P_A would not provide a reason for either P_B or its occurrence. The same conclusion would follow even if P_A and P_B were viewed as active and passive *states* (respectively), rather than merely as the states of active and passive monads. Second, the argument seems to target the wrong *explanandum*. What we should like to understand is not why P_A provides a reason for P_B or even P_B 's occurrence, but why it provides a reason for a , the relevant change. Leibniz's view is after all that the cause is that thing "from whose state a reason for *the changes* is most easily given" (MP 79=LC 311, emphasis added; cf. L 337; NE 211). Third, the argument appears to presuppose that the distinguishing feature of a cause is its reason-giving character; that is, that causes provide reasons for effects, but not vice versa. Yet Leibniz's thought seems to be that both cause and effect express the reason for the changes taking place, and that causes are distinguished from effects by the fact that they represent such reasons *more distinctly*, or alternatively, as the text just quoted indicates, in a way that makes the reason easier to come by. What we need, then, is an explanation of the connection between a cause's more distinct representation and the fact that it more readily provides us with a reason for the relevant changes. Though Brandom does not attempt to account for *this* particular nexus, perhaps his theory could do so along the following lines. Suppose that A represents the reason for B 's changes more distinctly than does B , in the sense that A 's representation of that reason (P_A) has a richer and more inclusive expressive range than B 's (P_B). Brandom could then

fully expresses a , where one set is inferentially stronger than another just in case the following condition is satisfied: for any perception p' in the latter set there is a perception p in the former set such that the expressive range of p properly includes that of p' . Now, says Brandom, we can see why the active state $k(m)$ provides a reason for the passive state $k(m')$. For since $k(m')$'s expressive range is a proper subset of $k(m)$'s expressive range, everything deducible from $k(m)$ will be deducible from $k(m')$. Hence, $k(m')$ itself will be deducible from $k(m)$, and so the latter will provide a reason for the former, in the same way that the premises of an argument provide a reason for the conclusion derived from them.

claim that a consideration of the states of A would more readily yield this reason because, intuitively speaking, fewer of them would need to be consulted. In other words, deducing this reason from A would require less knowledge of A than inferring it from B would require of B . Thus, though A and B would both express this reason, A would be deemed the cause because it makes this reason more readily available than does B . This appears to be the most promising account of activity that can be given within the framework of Brandom's theory.

3.3.2 Two Additional Senses of Distinctness

The inference potential model clearly does not apply to those contexts in which Leibniz associates distinct perception with awareness. Those distinct perceptions cannot simply be ones that express relatively many accidents, since many perceptions of which we are aware have little expressive content, whereas many of which we are unaware express a great deal. Brandom therefore introduces a second sense of distinctness which is related to the first and is inspired by Leibniz's talk of perceptions being or becoming "developed" and "heightened," as when he remarks that confused thoughts differ from distinct ones in that they are "less distinguished and less developed because of their multiplicity" (NS 117). Brandom's key suggestion is that in contexts pertaining to awareness, Leibniz uses 'distinct' to mean 'developed', and that a perception P is developed just in case it satisfies two conditions: (i) P gives rise to another perception P' , either directly or indirectly; (ii) P' "specifies" the content of P , in the sense that P' 's expressive range is a superset of P 's. When both conditions are met, Brandom claims, P is apperceived and P' constitutes an awareness or apperception of P .

This account treats apperceptions as a special case of perceptions, in particular as second-order perceptions (perceptions of perceptions rather than of external objects). It is often claimed that Locke held this sort of view about awareness, and Brandom assumes without argument that Leibniz does too.³¹ The assumption is a contentious one, however. I myself am inclined to think that Leibniz views apperception as something *sui generis*, and not merely

³¹Simmons (2001, 43, 53–55, 66) does too.

as a special kind of perception, primarily on the ground that he sometimes distinguishes between perception and apperception in such a way as to suggest not that the latter is merely a special case of the former, but that it belongs to a whole other genus. The distinction, that is, is not between two kinds of perception, but between perception and something quite different from perception. I do not want to insist on this point, however. I merely want to point out that even if I am right about apperceptions not being perceptions, this calls only for a modification rather than a wholesale rejection of Brandom's account. For even if awareness is not a species of perception, we must still acknowledge that a perception is noticed just in case it is in some sense distinct, and Brandom's account would be providing a specification of this sense. That is, Brandom could claim that perceptions are apperceived just in case they are developed in the sense defined above. The difference would be that the developing perceptions would not themselves be the apperceptions. Alternatively, he could maintain that the developing perceptions are the ones apperceived. In either case, his account survives this objection, *mutatis mutandis*.

Brandom claims several advantages for his account of awareness. First, it gives us a plausible understanding of Leibniz's use of the term 'distinct' in contexts pertaining to awareness. As we saw in the previous section, Leibniz clearly envisages a close connection between awareness and a perception's being heightened or distinguished. But on Brandom's account, being heightened or distinguished is nothing other than being developed, so he has given us an explication of the conditions for apperception. Second, the objection of the previous paragraph notwithstanding, his account of awareness provides us with an answer to the question what distinguishes perceptions of external objects from apperceptions, understood as perceptions of other perceptions. The answer it provides is that apperceptions are perceptions which are developings of some other perception. Perceptions of external objects, by contrast, would be those that are not developings of other perceptions. Third, Brandom's theory of awareness allows him to give a nifty and elegant account of the nature of sensation. Sensations, on Leibniz's view, arise somehow from infinite multitudes of *petites perceptions* each one of which is too small to be apperceived individually.³² According to Brandom, this occurs when each of the small perceptions has some content in common with all the others,

³²For more on this, see §4.1.

and this content (alone) is developed by some one perception, the sensation. This sensation, being a developing of the common core of these small perceptions, makes us aware of what they have in common without making us aware of the features that differentiate them from one another. Thus when we perceive a thorough mixture of yellow and blue as green, for example, our perception of green is a developing of the common core of a vast multitude of tiny perceptions of yellow and blue. In sensing the green, I am sensing what the yellow and blue have in common with one another.

Brandom's first sense of distinctness applies to perceptions with relatively rich expressive ranges, whether apperceived or not; his second embraces perceptions that are developed or apperceived, whether content-rich or not. Now we will introduce his third sense of distinctness. Unlike the previous two, this kind of distinctness does not appear explicitly in Leibniz's writings: no passage can be cited in which he speaks of distinct perceptions and has this third sense in mind. Yet Brandom wants to make room for it in his theory because on his view, Leibniz commits himself to this kind of distinctness in his discussions of distinct ideas. Here, in brief, is how Brandom sees that commitment as arising. Leibniz holds that ideas are dispositions to think, specifically to recognize, and the thoughts that occur in the realization of these dispositions are *recognitions*. Recognitions can be either *simple* or *by marks*. A simple recognition occurs when one recognizes a thing apart from any explicit knowledge of its distinguishing features, as when an art critic perceives the beauty of a painting but cannot say in what its beauty consists. Such recognitions are the realizations of *clear but confused* ideas, so we can say that they are themselves clear but confused in a corresponding sense. That is, simple recognitions are a kind of clear but confused thought or perception. We recognize a thing by marks, by contrast, when our recognition is based on an explicit knowledge of its distinguishing features, as when an assayer judges something to be gold because it passes certain tests. Such recognitions are the realizations of *distinct* ideas and as such are distinct in a corresponding sense. That is, recognitions by marks are a kind of distinct thought or perception. Hence we have a third sense of perceptual distinctness, the job of which is to indicate that a perception is not a mere recognition but a recognition by marks.

Before introducing Brandom's account of recognition by marks, we must mention a com-

plication. On his reading, Leibniz originally held that distinct recognition can occur when only one mark is known, but changed his view sometime around 1704 in response to the following dilemma posed by Locke and discussed in the *New Essays* (NE 312; cf. 345). In statements such as “Gold is malleable,” the objection goes, ‘Gold’ signifies either a collection of qualities, including that of malleability, or some underlying reality the nature of which gives rise to its malleability. If the former, then the statement is vacuous, a mere tautology; if the latter, however, the statement is unintelligible, since this underlying reality is completely unknown. All such statements are therefore either empty or unintelligible, which is absurd. Leibniz answers this objection by suggesting a third possibility: in most cases when a sentence such as “Gold is malleable” is uttered, ‘Gold’ refers to a collection of qualities, but not one including the property of malleability. Thus, uttering this sentence in such a case would be tantamount to claiming, for example, that “The heaviest of all bodies is also malleable,” which is neither tautological nor unintelligible. This solution, as understood by Brandom, commits Leibniz to the view that distinct ideas require that we know at least *two* marks of a thing, and consequently to the view that distinct recognitions—the perceptions realizing these ideas—involve recognizing that two (or more) marks belong to a single thing. Now we are ready for Brandom’s account.

A recognition is, naturally enough, a perception that is apperceived, that is, a developed perception. So what Brandom needs is an account of those developed perceptions which are recognitions of some pair of marks as marks of a single thing. This he achieves by maintaining that distinct recognition occurs when we have a single apperception (developing) of two or more perceptions which each represent a different mark as being a mark of some one thing. To illustrate, let P_a be my perception of gold as the heaviest metal, and P_b my perception of gold as the most malleable yellow metal. Let P_a be developed by P_a' , P_b by P_b' , and P_a' and P_b' jointly by some perception P_{ab}' . P_a' and P_b' will therefore be recognitions, respectively, of gold being the heaviest metal and gold being the most malleable yellow metal, while P_{ab}' will be an awareness of these two marks as belonging to the same thing (i.e., gold). Prior to 1704, Leibniz would have viewed P_a' and P_b' as distinct recognitions. But after the change in view forced by Locke’s puzzle, only perceptions such as P_{ab}' count as genuine recognitions by marks. A perception is distinct in the third (and strongest) sense, then,

when it simultaneously develops two (or more) awarenesses of distinct marks as belonging to some one thing. In short, these distinct perceptions are awarenesses of certain multitudes of awarenesses.

It should be mentioned that this account of distinct recognition introduces a significant tension into Brandom's theory. He acknowledges that "the beasts of the field could possess distinct recognitions ultimately based on their senses that differ from the inferential realization of distinct ideas *only* in that the development of expressive content essential to them is not underwritten by the necessary and general truths of reason" (174). This seems correct, since animals presumably can be aware of two or more marks as belonging to a single thing. A rat, for example, may recognize some pellets as poison (and therefore avoid them) because it apperceives that they have a certain color together with a certain odor. However, if beasts can have distinct recognitions, then they must be in possession of distinct ideas, since the former are merely realizations of the latter. (If the rat can distinctly recognize poison, then it must have a disposition or ability so to recognize poison.) Yet Brandom (151) also acknowledges, quite correctly, that brutes cannot have distinct ideas. So on his account, it seems that animals both can and cannot have distinct ideas.

The tension turns out to be non-fatal, however. Let me mention just one strategy for resolving it. We saw back in §2.3.1 that Leibniz reserves the term 'thought' for those perceptions which occur in minds, that is, in monads with a faculty of reflection. Similarly, I argued in §2.3.2 that he applies the terms 'idea', 'concept', and 'proposition' only to the immediate internal objects of *thoughts*, even though perceptions generally have such objects. It seems to me that Brandom could make a similar move. That is, he could hold that recognitions are realizations of *ideas* only when the recognizer is a rational being. In other cases, the recognition would be the realization of something like an idea, something that stands to an idea roughly as a mere perception stands to a thought.

3.3.3 Evaluation

With all the major components of Brandom's theory now on the table, we can consider its overall plausibility and viability. To begin with, its greatest asset is clearly, as advertised, its

remarkable explanatory power. Several examples of this virtue have already been discussed along the way:

- The account provides a plausible analysis of the way in which monads, including bare ones, are individuated by the degrees of distinctness of their perceptions: though monads all perceive the same things, they divide up that expressive labor among their various perceptions in unique ways.
- Understood in the way I have suggested, the view illuminates the connection between an active substance's more distinct perception and the fact that it yields more readily the reason for the changes it is said to cause.
- The theory of developed perceptions explains the connection Leibniz envisions between distinctness and awareness and allows for an interesting and novel account of how sensations arise through the joint-stock development of the common expressive core of infinite collections of *petites perceptions*.
- The account of recognition by marks explains the sense in which perceptions realizing distinct ideas are distinct.

There are other, less important explanatory virtues mentioned by Brandom, but these are the main ones, and they are significant. Yet, as strong as Brandom's theory appears in this department, I actually believe he has significantly *understated* its merits. He concludes toward the end of his essay that his three senses of distinctness "enable one to explicate all of Leibniz's pronouncements concerning distinctness of perceptions" (175). This conclusion is surely premature, though, given that important parts of Leibniz's view have not been addressed by the theory. For instance, no mention has been made of the connections between distinct perception, understanding, and freedom (or of the connections between confused perception, sensing, and bondage). Further, no attempt has been made to come to grips adequately with what I have called the priority thesis, that every soul represents its own body more distinctly than any other; Brandom does indicate (167) that his first sense of distinctness is the one relevant to this thesis, but he does not consider or attempt to resolve the tension to which the thesis gives rise when considered together with what I have called the instrumentality thesis. These are all points that we should expect a comprehensive theory of

distinct perception to address. And in fact, I believe that Brandom's theory, developed in the right way, could adequately address most if not all of them. In particular, the strategies I will be deploying in the next chapter in the development of my own view could be appropriated by Brandom, at least for the most part, in such a way as to complete his account. But I will not be arguing for this claim here because I believe that even if it is true, we have, or rather will soon have, good reasons for rejecting Brandom's inference-oriented approach to perceptual distinctness. More on this below.

In a previous critique, Margaret Wilson concludes that Brandom's theory can only be viewed as "an attempt to make out what Leibniz *could say* about distinct perception that bears only the most tenuous connection to what he actually does say" (1992, 341; cf. Bennett 2001, 310). Here there are two points to make. First, some of Brandom's proposals have no clear textual basis. An example would be his theory of developed perceptions. Impressive though the theory is, we will look in vain for any sign of it in Leibniz's writings; hence the claim that developed perceptions are ones that give rise to perceptions that specify their content must be considered entirely conjectural. Second, what textual evidence we do have for the view underdetermines the theory. I noted earlier that several passages establish a connection between perceptual distinctness and increased inference potential. What they do not establish, however, is that this connection is one of identity, as Brandom asserts. As we will see in the next chapter, there is another way of understanding Leibniz on which degrees of distinctness are *correlated* with degrees of inferential richness, and the texts in question give us no reason to favor one of these approaches over the other. Still, it might be supposed that the inference potential account of distinctness receives indirect support from the fact that it is a natural corollary of Brandom's inferentialist reading of representation. This would be so if we had reason to accept that reading, but recall from §2.4 that we do not. In the first place, the textual evidence for that position suffers from the same problem of underdetermination. Though Leibniz clearly thinks that with at least some representations we can "pass from a consideration of the relations in the expression to a knowledge of the corresponding properties of the thing expressed" (L 207 [13]), he gives no indication that he understands representation to *consist* in the potential for such passage or inference. Moreover, I have also shown that there is better evidence for an alternative

account of representation predicated on the idea that this “passing” or inferring takes place because “a certain analogy is maintained between the relations” of the expression and those of the thing expressed. The preponderance of evidence thus points to the conclusion that Leibniz is not reducing representation to inference, but both representation and inference to structural correspondence.

Wilson’s criticism therefore seems justified. Yet it is important to realize that by itself it does not warrant rejection of Brandom’s position, insofar as the view’s impressive explanatory power lends support to the claim that it accurately represents Leibniz’s position. It may be that Leibniz held such a view, implicitly or explicitly, but for whatever reason never expressed himself clearly or in detail; in that case, the only way to know what he thought would be to develop a theory that accounts for as much of what he did say as possible, and the scarcity of textual support would not count against such a theory. I believe, however, that this is not the case. In the next chapter I will be developing and defending an alternative account of perceptual distinctness that not only enjoys considerable textual support but has numerous theoretical advantages, including at least as much explanatory power as Brandom’s theory. If I can deliver on this promise, then it will be clear that Brandom’s view should be rejected in favor of my alternative. But for now his view must remain a live option.

3.4 DISTINCTNESS AS RATIONAL PRIORITY IN THE MIND OF GOD

In her treatment of the difference between distinct and confused perception in Leibniz, Margaret Wilson (1992) considers and rejects (for reasons quite different from those I have given) both the prevailing view and Brandom’s proposal. She goes on to suggest the following alternative: “a perceptual state \mathbf{p} of monad \mathbf{M} is *more distinct than* perceptual state \mathbf{q} of monad \mathbf{N} , insofar as \mathbf{M} ’s being \mathbf{p} provides God’s reason for creating \mathbf{N} with \mathbf{q} , rather than the other way around” (343–44). In other texts, she clarifies this proposal; the idea is not just that relative distinctness is *correlated* with rational priority in the mind of God, as her use of ‘insofar as’ in the above formulation would suggest. Rather, the suggestion is

that we “identify relative distinctness as superiority in the order of reasons in God’s mind” (344; cf. 345). She goes on to emphasize, correctly, that there is clear textual support in Leibniz’s writings for a connection between distinctness and rational priority in the mind of God. This connection emerges most explicitly in his discussions of activity, where Leibniz maintains that the creator accommodates (some of) the perceptions of one substance with those of another in order to bring them into harmony; when this happens, the accommodated perceptions are said to be less distinct than those to which they have been accommodated. In this way, there is a kind of ideal influence of one substance on another, and so we are justified in speaking of them as active and passive, even though they have no real influence on one another. Thus, he says of substances that “each one is assumed to act upon the other in proportion to its perfection, although this be only ideally, and in the reasons of things, as God in the beginning ordered one substance to accord with another in proportion to the perfection or imperfection that there is in each” (T §66). And again he writes in the *Monadology*:

50. And one creature is more perfect than another insofar as one finds in it that which provides an *a priori* reason for what happens in the other; and this is why we say that it acts on the other.

51. But in simple substances the influence of one monad over another can only be ideal, and can only produce its effect through God’s intervention, when in the ideas of God a monad reasonably asks that God take it into account in regulating the others from the beginning of things. . . .

52. It is in this way that actions and passions among creatures are mutual. For God, in comparing two simple substances, finds in each reasons that require him to adjust the other to it; and consequently, what is active in some respects is passive from another point of view: *active* insofar as what is known distinctly in one serves to explain what happens in another; and *passive* insofar as the reason for what happens in one is found in what is known distinctly in another.

These passage, and several others,³³ clearly establish a connection between the priority one perception has over another in the divine calculus and relations of relative distinctness. Wilson’s proposal is simply that we take this connection to be one of identity: what it means for one perception to be more distinct than another is that God gives the one priority over the other in creating the world.

³³DM §15; CA 154; NS 20; AG 202-3.

Wilson does not develop this account in any further detail, and neither shall we. For despite her optimism, the view can be seen to be a dead end from the start. The problem is simply this: she has the direction of explanation backwards. She wants to reduce distinctness to rational priority in the mind of God, but the explanation ought to proceed in the opposite direction. If one perception is more distinct than another because he gives the first priority over the second, then we are entitled to ask what grounds he has for this ordering. We cannot reply that his decision has no ground, because that would entail something that never happens: a violation of the principle of sufficient reason, according to which there is always a reason why things are one way rather than another. Nor, from the perspective of Wilson's view, can we answer that God gives priority to the more perfect or distinct perceptions, for then our explanation would be circular. The idea was to explain the perfection or distinctness of a perception by appeal to its rational priority; we cannot then turn around and propose to explicate rational priority in terms of perfection or distinctness. But what, then, could be God's sufficient reason for favoring one perception over the other? No viable answer seems forthcoming. Wilson's proposal therefore appears to introduce into Leibniz's system precisely the sort of unintelligibility that he so detested, and that he criticized Locke and Bayle, among others, for tolerating.³⁴ By contrast, there is no special problem in explaining God's assignment of priority to one perception over another in terms of differences in degree of distinctness, so long as we do not try to run the explanation in the opposite direction at the same time. This difficulty, it seems, tells decisively against Wilson's proposal.

With this, I conclude my survey of the current landscape and proceed to my own positive proposal.

³⁴See, e.g., NE 56, 131, 165-66, 381-82, 403-4; T §340.

4.0 DISTINCT PERCEPTION: THE EXPLICIT CONTENT ACCOUNT

I want to propose an account of perceptual distinctness that builds naturally upon the idea, defended in Chapter 2, that representation occurs in virtue of a kind of structural correspondence between representing thing and thing represented. The basic idea will be that a perception is better or more distinct to the extent that its structure, or content, is *explicit* or accessible to the perceiver. Every perception must have some structure, since otherwise it would not represent. But with confused perceptions, I will argue, the structure is in a sense hidden and merely implicit—beyond the reach of the perceiver’s awareness. Distinct perceptions, by contrast, have a content that at least for the most part can be grasped by the perceiver; they wear their content on their sleeves, so to speak. As we shall see, Leibniz often puts this point by saying that with distinct perceptions we can discern or distinguish their *ingredients*, that is, the smaller perceptions that compose them. With confused perceptions, however, the ingredient perceptions are present, but they are rather undistinguished, and hence do not capture our attention. Roughly speaking, then, distinct perceptions are not only distinguished, but have ingredients most of which are distinguished and therefore noticeable, whereas confused perceptions, even if distinguished, have ingredients most of which are not sufficiently distinguished to be noticed.¹

Before elaborating on this rough sketch, I want to give the reader a sense of how prominent these notions of distinctness and confusion are in Leibniz’s writings.

¹Here I am using ‘distinguished’ in the sense given in §3.2.

4.1 THE TEXTUAL EVIDENCE

Consider first these two remarks:

For even though the soul is a simple and unique substance, it never has simple and unique perceptions. It always has, all at once, several distinct ones that it can remember, and attached to them an infinity of confused ones the ingredients of which it cannot distinguish. (G IV 547-48=NS 103)²

I hold that in our confused thoughts there are many things of which we are not aware, since a confused thought consists of innumerable small perceptions, which, on account of their vast number, it is not possible to distinguish, even if we are aware of their result. (LW 32)

In both of these texts Leibniz indicates that confused perceptions have ingredients that cannot be distinguished in them. In neither does he explicitly identify this property as the one that makes these perceptions confused, but his comments certainly *suggest* this. There is another text, however, in which he makes this point quite explicitly:

One ordinarily conceives of confused thoughts as being of an entirely different kind from distinct thoughts However, it is true nevertheless that at bottom confused thoughts are nothing else but a multitude of thoughts which are in themselves like distinct ones, but which are so small that each by itself does not excite our attention and is not distinguished. One can even say that there is all at once a truly infinite number [of them] enveloped in our sensations. It is in this that the great difference between confused and distinct thoughts truly consists, which is exactly the same as that between machines of nature and of art, as was explained when the new system was published in the *Journal des savants*. (NS 140)

In this passage more than any other, Leibniz endeavors to elucidate how confused perceptions differ from distinct ones. The key remark is that “confused thoughts are nothing else but a multitude of thoughts which are in themselves like distinct ones, but which are so small that each by itself does not excite our attention and is not distinguished.” At first blush, the statement seems to admit of two quite different readings. He could be claiming that *confused thoughts* are in themselves like distinct ones, but are so small and undistinguished that each by itself does not capture our attention. If this is his meaning, then this passage would lend further support to suggestion that being distinct is a matter of being distinguished (cf. §3.2). However, the text does not require this reading and, in fact, rules it out. It is important to

²The significance of this passage has unfortunately been obscured by Woolhouse and Francks’ inexplicable failure to translate the expression ‘*dont elle ne sauroit distinguer les ingrediens*’; see NS 103.

notice that the small, undistinguished thoughts of which Leibniz is speaking here are not the confused thoughts themselves but the thoughts that compose confused thoughts. Confused thoughts are not to be identified with these undistinguished thoughts themselves, but with *multitudes* of them. To paraphrase Leibniz, a confused thought is nothing other than a multitude of thoughts, which thoughts are in themselves like distinct ones, but which are so small that each by itself does not capture our attention and is not distinguished from the rest. A confused thought is thus a perception in which the ingredients or components cannot be discerned or noticed, given that they are too small and undistinguished. One confirmation of this reading is that Leibniz says of these small, undistinguished thoughts that there is indeed a truly infinite number of them *enveloped in our sensations*. These sensations are special cases of the confused thoughts that he characterizes several lines above as multitudes of such small thoughts; thus when he states that there is a truly infinite number of these small thoughts enveloped in our sensations, though his main point is to add that these multitudes are truly infinite, he is reiterating the point that our confused thoughts comprise multitudes of small, undistinguished perceptions. Further corroboration comes from Leibniz's comment that confused thoughts differ from distinct ones exactly as natural machines differ from artificial ones. As he explains in the "New System" essay to which he adverts, and elsewhere, natural machines have an infinity of parts which are themselves (natural) machines, whereas artificial machines have only a finite number of parts which are themselves (artificial) machines (NS 16, 214; L 589; M §64; etc.). An automobile engine, for example, is a machine composed of many parts which are themselves machines, and some of these are composed of smaller machines, and so forth. But there is an end to this, for eventually we will come to the smallest parts of the engine—the nuts, bolts, springs, shafts, and the like—which are not themselves machines in the sense in which the engine is, that is, artificial machines, or at least are not composed of such machines. Natural machines, however, "being machines down to their smallest parts, are indestructible because of the envelopment of a small machine in a larger one to infinity" (L 589). Thus, natural machines are composed of an infinity of (natural) machines, whereas artificial machines are composed of at most a finite number of (artificial) machines. In the same way, confused perceptions are composed of an infinity of perceptions, which cannot be distinguished by the perceiver

because they are so small and numerous, whereas distinct perceptions consist of at most a finite number of perceptions, which can (at least potentially) be distinguished. Indeed, not only are confused perceptions composed of an infinity of perceptions, but each of these constituent perceptions will itself be confused (i.e., will be composed of undistinguished perceptions), and so forth to infinity. And in general distinct perceptions will be composed of some finite number of perceptions which are themselves distinct, though this will not continue to infinity. The analogy between machines and perceptions is thus very close.

Leibniz's discussions of the nature of sensation or sense perception provide many other texts in which he indicates that perceptual confusion has to do with implicit content (thereby implying that distinctness consists in explicitness of content). Let us start with a brief sketch of his account of sensation. On his view, the physical world is infinitely complex, and even the smallest body is actually infinitely divided into smaller bodies. Thus, since each monad perceives the world in its entirety, it follows that at any time a monad perceives an infinity of things and, indeed, has an infinity of perceptions.³ But created monads are limited with respect to their ability to notice or be aware of these perceptions, and this limitation is what gives rise to sensation or sense perception:

We also see that the perceptions of our senses, even when they are clear, must necessarily contain some confused sensation, for as all the bodies of the universe are in sympathy, our body receives the impression of all the others, and even though our senses are related to everything, it is not possible for our soul to attend to everything in particular; that is why our confused sensations are the result of a truly infinite variety of perceptions. This is almost like the confused murmur that is heard by those who approach the seashore, which comes from the assemblage of repercussions of innumerable waves. Now, if from several perceptions (which do not come together to make one), there is none which stands out before the others and if they make impressions that are almost equally strong or equally capable of gaining the attention of the soul, the soul can only apperceive them confusedly. (DM §33, AG 64-65)⁴

³L 557; NS 102-3; NE 113; G III 657; cf. G VI 522.

⁴In a number of passages, including this one, Leibniz speaks of distinct or confused *apperception*. I will not be offering any detailed account of these puzzling phenomena, but here is one suggestion. We apperceive a perception distinctly when we apperceive it individually, and not merely through the contribution it makes to some larger perception. We apperceive a perception confusedly, then, when we apperceive it only through apperceiving some larger perception of which it is an ingredient. The obvious problem with this account is that apperception is a kind of awareness, but on this account, confused apperception is really a lack of awareness.

According to this passage, our sense perceptions result from an infinity of perceptions of the other bodies of the universe, which we are unable to apperceive because they are not sufficiently distinguished, and this is what makes them confused. Leibniz illustrates this phenomenon with the example of the confused murmur of the sea. The point of the example is that we hear the murmur when we perceive confusedly the sounds of the individual waves crashing on the shore. These sounds, however, are too minute for us to notice, and so instead we hear the murmur which results from our failure to apperceive individually the perceptions of the individual waves. These sensations are confused, then, in the sense that we cannot discern or distinctly notice their ingredients or constituents (the smaller perceptions out of which they are composed), even though the confused sensations themselves are quite distinguished, just as we cannot notice or discern the sounds of the individual waves in the murmur of the sea, even though our perception of the murmur itself is quite distinguished.

Leibniz tells essentially the same story about our perceptions of sensible (secondary) qualities. Our “sensations of colors, tastes, and feels” are said to be confused because they arise from a “confusing into one” (*in unum confusis*) of vast multitudes of perceptions of the intelligible qualities in bodies, that is to say, the minute shapes and motions of their parts (DSR 524). Here he explains the point in more detail:

when we perceive colors or smells, we certainly have no perception other than that of shapes and of motions, though so very numerous and so very small that our mind cannot distinctly consider each individual one in this, its present state, and thus does not notice that its perception is composed of perceptions of minute shapes and motions alone, just as when we perceive the color green in a mixture of yellow and blue powder, we sense only yellow and blue finely mixed, even though we do not notice this, but rather fashion some new thing for ourselves. (AG 27)

Our perceptions of sensible qualities are thus composed of perceptions of shapes and motions. But these latter perceptions are so small and numerous that we are unable to pick them out of the confusion; we are unable to notice that they are constituents or ingredients of our sensible perceptions, and this is what makes them confused. In the same way, perceptions of color are confused because “their [colors’] composition cannot be discovered through the sensation we have of them” (G IV 550=NS 105). Leibniz makes this point most explicitly in a very revealing passage of the *Theodicy*:

The representation often suppresses something in the objects when it is imperfect; but

it can add nothing: that would render it, not more than perfect, but false. Moreover, the suppression is never complete in our perceptions, and there is in the representation, confused as it is, more than we see there. Thus there is reason for supposing that the ideas of heat, cold, colors, etc., also only represent the small movements carried out in the organs, when one senses these qualities, although the multiplicity and smallness of these movements prevents distinct representation. Almost in the same way it happens that we do not discern the blue and the yellow which play their part in the representation as well as in the composition of the green, when the microscope shows that what appears to be green is composed of yellow and blue parts" (§356 = G VI 327-28).

What makes representations confused or imperfect, we see here, is that they suppress something, in the sense that they represent "more than we see there," just as our ideas of sensible qualities represent various minute motions in our organs which we are unable to notice because of their multiplicity and smallness. We sense these qualities, he says, but we are unaware of the small perceptions of motions that compose these sensations, and thus we cannot represent the qualities distinctly. For to represent them distinctly would be to represent them in such a way that we could discern the contents of those qualities. Once again we see that perceptions are confused in the sense that they have ingredients or components that the perceiver cannot distinguish within them.

Our perceptions of the pleasantness or unpleasantness of music also fall into the category of sensations; they too are confused in the sense that we cannot discern their ingredients. As Leibniz explains it, these perceptions consist in an "occult arithmetic" in which the soul subconsciously "counts the beats of the vibrating object which makes the sound." When the beats coincide at regular intervals, the soul finds them pleasant, and when they do not, it finds them unpleasant. These small operations of the soul thus give rise to a sensation that is "clear but confused, because its sources are not noticed" (G IV 550-51). The sensation is clear because we notice the pleasantness or unpleasantness of the music, but it is confused in the sense that we are unable to discern within it the many *petites perceptions* of beats of the vibrating object, these beats being the "sources" of the sensation.

Notice that the confusion in our sensations can have both synchronic and diachronic aspects. It is synchronic when we perceive too many things at a time, as when we sense the thorough mixture of yellow and blue as green, or perhaps when matter appears continuous, even though it is actually discrete (G VII 564, etc.). This is the sort of confusion Leibniz

has in mind when he remarks that “we see things confusedly when we see too much at a time” (G VI 575). But confusion can also occur diachronically, when our perceptions take some time during which we perceive more than we can process. For example, when the rapidly spinning cog-wheel appears to us as a continuously transparent ring, it is because we “confound successive things into an apparent simultaneity” and in this way perceive the alternating teeth and gaps confusedly (NE 403-4; cf. G VII 564). Something similar happens when we perceive “actual motion” (the motions of bodies) as continuous when in reality it is discrete (G VII 564).⁵ Such motion is discrete, evidently, because when an object *O* moves from point *a* to point *b* in some time, it does so by making infinitely many little jumps. But no created monad has the ability to notice these individual jumps, given that they are so small and numerous. Further, Leibniz holds that our perceptions of sensible qualities are sometimes diachronically confused; they consist “not in one act of the intellect, but in an aggregate of infinitely many acts, especially when some period of time is needed for the sensation of some color or other perceptible thing” (DSR 524). The confusion in our perceptions is thus sometimes synchronic, sometimes diachronic. In some cases it is both, as when the sounds of many drops of water hitting the seashore or the voices of a crowd of people sound like a dull roar (NS 83). When we hear these sounds we not only hear too much at one time, but our perceptions take some time, and over that time we hear too much.

These texts suffice to show that the conception of distinctness under discussion occupies a prominent place in Leibniz’s thought.⁶ Admittedly most of them focus on confusion rather than distinctness, but in providing support for the idea that confusion is a matter of implicit

⁵Actual motion contrasts with mathematical motion, which is continuous but only ideal. For more on this, see Leibniz’s letter to Princess Sophie from 31 October 1705 (G VII 564).

⁶There is a passage of possible relevance in which Leibniz distinguishes between different kinds of inclinations and propensities, which in the context he treats as perceptions of perfection or imperfection:

There are insensible inclinations, which we do not apperceive. There are sensible ones, the existence and object of which we know, but the formation of which we do not sense, and these are the confused inclinations that we attribute to the body although there is always something corresponding to them in the mind. And finally there are distinct inclinations which reason gives us; we sense both their strength [*force*] and their formation. (NE 194)

The significance of this passage for our purposes hinges on how we understand Leibniz’s talk of an inclination’s formation. Remnant and Bennett translate ‘*la formation*’ as ‘constitution’. If this is correct, then the difference between distinct and confused inclinations (perceptions) lies with our ability to know how they are constituted: with distinct inclinations we can grasp their constitution, that is, their structure or content, whereas with confused ones we can at most know that they exist and that they incline us toward such and such thing. This reading is plausible and brings the passage into harmony with the explicit content view, but other readings are equally plausible, so I am not putting much weight on it.

content, they implicitly corroborate the explicit content account of distinctness. The real test for this account, however, will be how it fares in connection with the various doctrines into which the notion of perceptual distinctness factors. I will be turning to this issue shortly, arguing that my proposal fits nicely with all of these doctrines, and indeed sheds considerable light on each. First, though, let us try to make the proposal itself clearer.

4.2 ELUCIDATIONS

1. A perception is distinct, I have been suggesting, not in the sense that the soul distinguishes it from other perceptions (though a distinct perception will be so distinguished), but rather in the sense that the soul distinguishes its *ingredient perceptions* from one another: a distinct perception is not only distinguished, but has distinguished ingredients. Conversely, when the ingredients in a perception are not very distinguished, the perception is confused, whether or not that perception itself is noticeable. As we have seen, Leibniz calls such perceptions confused because they arise from a sort of confusing or running together of a multitude of *petites perceptions* (which then become ingredients in the larger perception to which they give rise). But we should bear in mind that in speaking this way, he is not suggesting that these minute perceptions are literally run together or con-fused.⁷ He does claim that sensing involves a “confusing into one” of an infinity of perceptions (DSR 524), and that when we perceive a rapidly spinning toothed or spoked wheel, for example, our mind “unifies the separate times and places” and consequently “successive things are confounded into an apparent simultaneity” (G VII 564; NE 403-4). But he also emphasizes that this confusion is properly speaking only apparent, and thus an epistemic phenomenon. When we have a great multitude of small perceptions, we are unable to notice them individually, and thus the larger perception which they come together to form is confused. But these small perceptions are not literally blurred together, so that the multitude of small perceptions ceases to exist and a large, distinguished perception comes to exist in their place. Rather, it is only *as if* we had confused these small perceptions into one, insofar as we are unable to distinguish them

⁷For the view that his talk is literal, see [Simmons 2001](#), 63, 68–69.

from one another. They remain quite separate despite our inability to recognize this fact. Leibniz likes to make this point using similes involving ponds. In §69 of the *Monadology*, for instance, he writes that “there is nothing fallow, sterile, or dead in the universe, no chaos and no confusion except in appearance, almost as it looks in a pond at a distance, where we might see the confused and, so to speak, teeming motion of the fish in the pond, without discerning the fish themselves.” Clearly the confusion in view here is merely the apparent confusion which arises from our inability to discern the “ingredients” of the pond. He puts the point even more explicitly in a letter to Sophie Charlotte: “It is not necessary that thoughts, by being confused, occupy place. But it is indubitable that corporeal images become gaunt [*se creusent*] and mingled, as when one throws several stones in the water at one time, for each one makes its own circles which are not in truth blurred, though they seem muddled to the spectator, who has difficulty disentangling them” (G VII 557-58). Essentially the same point is made in several other passages (G III 565, VI 519, VII 566). The confusing or blurring of perceptions, then, is only a blurring in appearance and not in reality.

2. On the explicit content view, the distinctness of our perceptions of external things will be a function of how closely we are related to those things. A perception is distinct to the extent that its ingredients are distinguished, but as we have seen, we tend to have more distinguished perceptions of those things that are nearer. When I perceive something nearby, not only will that perception tend to be relatively distinguished, but its ingredients will tend to be relatively distinguished as well. Thus if I see two qualitatively similar towers, one nearby and the other off in the distance, not only will my perception of the former tower be more prominent or distinguished than my perception of the latter, but my perceptions of the details of the former tower will be more distinguished than those of the details of the latter. In other words, the ingredients of the one perception will be more distinguished than those of the former. In this way, degree of distance will correspond, at least roughly, to degree of distinctness. This point is significant for two reasons. First, the explicit content account sorts well with those passages in which Leibniz indicates that we perceive more distinctly that which is closer (MP 177; M §60). Furth had quoted one such text in support of his reading of ‘distinct’ as ‘conscious’, but in fact my view fits equally well with such remarks. Second, my view poses no special difficulties for Leibniz’s apparent desire to effect

a straightforward reduction of distance and degrees of distance to degrees of perceptual distinctness (cf. §3.1.6). For how distinctly I perceive something will be at least in part a function of how closely I am related to it.

3. When I speak of perceptions of things near and far being more or less distinct, of course, I do not mean to suggest that any of them are distinct *on the whole*. For these will always be *sense* perceptions, and sensings are supposed to be (on the whole) confused. To clarify: I hold that perceptions are distinct *simpliciter* (or on the whole), roughly speaking, just in case most of their ingredients are sufficiently distinguished to be noticed; otherwise they are confused *simpliciter*. Thus distinct perceptions can be somewhat confused, to the extent that some ingredients are less than fully distinguished, and confused perceptions can be to some extent distinct insofar as their ingredients are not altogether undistinguished. In the example from the previous paragraph, my perceptions of the two towers will both be confused (*simpliciter*), even though one will be more distinct than the other. There can be degrees of distinctness among confused perceptions, and degrees of confusedness among distinct perceptions, just as there can be degrees of loudness among very faint sounds.

4. It is worth emphasizing again the connection on my view between distinctness and finitude, and between confusedness and infinitude. Recall that in Leibniz's most explicit discussion of the difference between confused and distinct perception, he remarks that this difference is "exactly the same as that between machines of nature of of art" (NS 140). By appeal to other texts, I showed that this difference is, in effect, that between a thing with an infinitely deep ingredient structure, and one with only a finitely complex structure. Therefore I take it to be characteristic of confused perceptions that they have infinitely many ingredients. That is why it will always be the case that for the most part their ingredients cannot be distinguished. For no matter how many of them we might manage to notice, an infinity will remain unnoticed. With distinct perceptions, by contrast, there will be only finitely many ingredients. Thus not only will these ingredients be more apt to be noticed, since they will not be as numerous, but it will be possible to distinguish a significant number of them given their finitude. That is to say, with distinct perceptions it is genuinely feasible for created minds to distinguish most of their ingredients.

5. I have said that a distinct perception is one most of the ingredients of which can be

discerned by the subject. In saying this, however, I do not mean to suggest that a perception is more or less distinct to the extent that more or fewer of its ingredients are sufficiently distinguished to be noticed. The idea is rather that a perception is distinct to the extent that its ingredients are distinguished. This allows for the perceptions of a bare monad, none of which have ingredients distinguished enough to be apperceived, to vary with respect to degree of distinctness, even though they admit of no variation in the number of their distinguished ingredients. The importance of this point will become clear when I apply the explicit content account to the issue of substance individuation (§4.3.1 below).

6. A major asset of the explicit content view is that it appropriates the most significant insight of Brandom's inference-based account: namely, that perceptual distinctness is bound up with inference potential. His view, in essence, was that (i) a perception is more distinct to the extent that it has a greater expressive range (or, alternatively, enfolds more accidents), and that (ii) inference potential is a function of expressive range. A higher degree of distinctness therefore equates to greater inference potential. Something similar is true on the explicit content account. I view the distinctness of a perception as a measure of how much of its content it makes available to the perceiver, and this will clearly determine how much the subject is able to deduce from a consideration of the representation. How much the subject can deduce from the perception will be a function of how much of the perception's content she is able to grasp. Thus, taking inference potential in this way, that is, to be a measure of how much a perceiver can actually infer from one of its perceptions, it will follow that this potential will be closely connected with distinctness. Brandom, by contrast, understands inference potential in terms of what could be inferred not necessarily by the subject of the perception, but by God or some sufficiently penetrating mind (or so I have argued: see §2.4). Thus whereas on his view degree of inferrability and therefore degree of distinctness is a function of expressive range—every accident enfolded is inferrable—on my view only those accidents which are notably expressed can be deduced. My view therefore drives a wedge between distinctness and inference potential, on the one hand, and expressive range, on the other. Distinctness correlates with inference potential, as I am understanding it, but neither correlates with expressive range.

7. In saying that Leibnizian perceptions are confused in the sense of having implicit

content, I am not claiming anything new. Essentially the same thesis has been advanced by such commentators as [Russell \(1900, §97\)](#), [McRae \(1976, 36-37\)](#), [Wilson \(1977, 325\)](#), [Parkinson \(1982, 6-7\)](#), and [Simmons \(2001, 63\)](#). However, this fact should not be allowed to obscure how much my approach differs from theirs. For none of them recognizes that Leibniz has a sense of distinctness opposed to this sense of confusion. They appear to believe that there are two kinds of perceptual confusion, but only one kind of perceptual distinctness. As a result, when giving an account of the nature of distinct perception, they have tended to regard the implicit content sense of confusion as irrelevant. For example, [Wilson \(1977\)](#) indicates that the “implicit complexity” conception of confusion is important, but then when she turns to the problem of perceptual distinctness some fifteen years later, this notion of confusion is nowhere in sight. She considers what I have called the prevailing view, that distinctness involves awareness, and then Brandom’s view, rejecting both. She then develops her own account, which we have already considered and found wanting. However, she never even mentions the possibility that the true concept of perceptual distinctness might be the complement of the sort of perceptual confusion she discussed in some detail in the earlier essay. The thought does not cross her mind, apparently, because though she well realizes that perceptions can be confused in the sense of implicitly complex, she does not see that they can be distinct in the complementary sense. Similarly, Parkinson and Simmons mention the implicit content sense of perceptual confusion, but only in order to contrast it with the sense they take to be primary (see §3.2). My approach differs significantly from these, for I claim that the implicit content sense of confusion is primary. Indeed, I will be arguing that it is the only sense of confusion that belongs in an account of Leibniz’s considered philosophy—a position that becomes plausible only because I find a conception of distinctness in Leibniz that these previous commentators failed to notice.

Now that we have at least a somewhat clearer picture of my view, we are in a position to see how it fares with respect to the various doctrines into which the notion of perceptual distinctness factors.

4.3 APPLICATIONS

4.3.1 Individuation of Substances

The numerical diversity of substances is supposed to consist in their unique profiles of variously distinct perceptions (in short, in their unique “distinctness profiles”). In terms of the explicit content view, this is equivalent to saying that each monad will represent (relatively) explicitly a unique segment of the content or structure of the world. A monad will represent a thing’s structure more explicitly as it is more closely related to that thing, or rather as its body is closer to or more strongly affected by that thing. But each body (and each monad) bears a unique set of relations to the other bodies of the universe. So each monad will have its own particular distinctness profile, understood as a measure of the extent to which it expresses the structures of things explicitly. To put the point more exactly, we can think of the distinctness profile of a monad Alpha as the set of ordered pairs $\langle P_i, D_i \rangle$ such that for any (real) object i , P_i is Alpha’s perception of i , and D_i a real number between zero and one (inclusive) corresponding to P_i ’s degree of distinctness (zero representing maximal confusion, and one maximal distinctness). D_i will be a measure of the extent to which P_i ’s ingredients are distinguished, which will of course be a function of how closely related Alpha is to i . But since Alpha will be related to the various bodies in the universe in ways that no other monad duplicates exactly, there will be at least one pair in Alpha’s distinctness profile that is not contained in the profile of any other monad. More precisely, we can say that for any two distinctness profiles α and β , there will be some object i such that the second element of the pair $\langle P_i, D_i \rangle$ in α will be distinct from the second element of the pair $\langle P_i, D_i \rangle$ in β .⁸

The case of bare monads presents a special difficulty for an account of perceptual distinctness. Is it possible for these substances to differ in the explicitness of their perceptions? It is indeed, because as I understand explicitness, there can be degrees of it even in perceptions that are not distinguished enough to be noticed. I emphasized above that a perception is more or less distinct as its ingredients are more or less distinguished, but as I argued back

⁸Recall that all monads perceive the same objects, so for any object i there will be a pair $\langle P_i, D_i \rangle$ in the distinctness profile of every monad.

in Chapter 3, even rather undistinguished perceptions can be more or less distinguished. By the same token, the rather undistinguished ingredients of a perception, whether itself distinguished or not, can be more or less distinguished. Thus, there seems to be no special obstacle to saying that all monads are distinguished by the degrees of distinctness of their perceptions, as understood on the explicit content view.

Consider again our example of the two towers. Suppose that as I am viewing these towers one day, I suddenly die and my soul enters a state in which there is no awareness. This is a state in which all of my perceptions have become too undistinguished to be noticed. My situation thus becomes like that of a bare monad. Now I will still be perceiving the two towers, and my perception of the nearer one will still be more distinguished than my perception of the farther one. More to the point, my perceptions of the details of the nearer tower will still be more distinguished than those of the details of the farther one. Thus my perceptions of the tower will still differ with respect to degree of distinctness, even though both are rather undistinguished. So the explicit content account fully satisfies the first of our five desiderata (§3.1.7).

4.3.2 Soul-Body Unity

An adequate account of the relation of substances to their bodies should explain the sense in which a monad perceives its own body more distinctly than any others (the priority thesis), and should do so in a way that is consistent with Leibniz's claim that monads perceive the world *through* perceiving their own bodies (the instrumentality thesis). (This was the second desideratum.) On the view I have been recommending, the priority thesis would seem to amount to the claim that a monad's perceptions of its body have more explicit content, or more distinguished ingredients, than its perceptions of any other bodies. At first blush that sounds like a good way of establishing some special connection between body and soul. In fact, however, understanding the priority thesis in this way seems to bring it into conflict with the instrumentality thesis. I argued back in §3.1.2 that the latter thesis appears to require that all our perceptions of external things also be perceptions of our own bodies. Yet if this is right, then it is hard to see how perceptions of the latter sort could generally be

more distinct than those of the former sort. That would be like saying that a certain mother loves her children more than she loves her sons. And so again we run into this problem.

I believe that these two theses can be reconciled, but before I can explain my proposal, I need to point out that on Leibniz's view, not only do soul and body express the same things, but they express them with the same degrees of distinctness. The thoughts of the soul, he holds, must represent what happens in the body, and therefore "they cannot be distinct when the traces in the brain are confused" (G VII 557). In the same way, "The perceptions of the soul always correspond naturally to the constitution of the body, and when there are many confused and not very distinguished motions in the brain, as happens with those who have had little experience, the thoughts of the soul (according to the order of things) cannot be any more distinct" (NE 117). Thus "the most distinct expressions in the soul correspond to the most distinct expressions of the body" (AG 81). As these passages reveal, bodies, like souls, are capable of expressing things with more or less distinctness, and in this sense they too can be said to have points of view on the universe, which consist in their unique distinctness profiles.⁹ Differences in degrees of expression also explain why the organic bodies of minds "vary no less in perfection than the spirits to which they belong" (T §124).

What are we to make of this talk of degrees of expressive distinctness in a body? According to the explicit content account, perceptions are more distinct to the extent that their ingredients are more apt to be noticed or apperceived. But presumably the expressions in bodies, and their ingredients, are not more or less apt to be apperceived, since properly speaking only modifications of the soul are apperceived. Nevertheless, we can say something similar about the expressive distinctness of bodies. Consider that my body represents other bodies through the impressions they make on it, and these impressions can be stronger or weaker. I suggest that the stronger impressions in a body correspond to the more distinguished perceptions in a soul. Further, note that the impressions in my body are always going to be composed (as it were) of other, weaker impressions, in the same way that my sense perceptions are always composed of other, smaller ones. That is, these weaker impres-

⁹Leibniz indicates in many places that a monad's point of view corresponds to that of its body: NS 18, 27; G VII 557/58; DM §33; L 340; MP 176; AG 81; NE 117.

sions are like the ingredients of stronger ones, just as *petites perceptions* are the ingredients of larger ones. Hence, we can understand the more distinct expressions of the body as those impressions which are not only relatively strong, but which have as ingredients impressions that are also relatively strong. The more confused representations of my body would then consist in those impressions that, while perhaps themselves quite strong, are composed of impressions that are rather weak. When I perceive something as red, for example, my eyes are being affected by the minute motions in that object. The motions, individually considered, make only a rather weak impression on my eyes. However, all together they make a fairly strong impression. This latter impression would therefore be a clear but confused corporeal expression. It corresponds to what in the soul we call a clear but confused perception, which is fairly distinguished, even though its ingredients are not. Something similar happens in the case of the two towers. The nearer one makes a stronger impression on my body than does the farther one. But the features and parts of the nearer one—its edges, the bricks and mortar, etc.—also make a stronger impression on my organs than do the features and parts of the more distant one. As a result, my body represents the nearer tower more distinctly than it represents the farther one, and corresponding to this, my soul perceives the one more distinctly than the other. In this way, bodies, like souls, can express things more or less distinctly, and each has its own unique distinctness profile, which because of the harmony of all things, corresponds exactly to the distinctness profile of the monad to which it belongs.

Now I can introduce my proposal for understanding the priority thesis. It is inspired by this rather significant remark from §33 of the *Discourse*:

[The soul's] perceptions must arise (spontaneously) from its own nature, and precisely in such a way that they correspond by themselves to what happens in the whole universe, but more particularly and more perfectly to what happens in the body that affects it, because the soul expresses the state of the universe in some way and for a time according to the relation of other bodies to its own. (DM §33)

Notice carefully what is being claimed here: the soul is said to express its own body more distinctly than others *because* it perceives the universe in accordance with the way in which its body is related to others. In other words, he is saying that what makes the priority thesis true is that a substance represents the world in accordance with the point of view of its body. But a body's point of view is nothing other than its distinctness profile. Hence, I suggest that

in the end, the priority thesis amounts to nothing more than this: that a monad represents the distinctness profile of its own body more distinctly than it represents that of any other body. Each soul represents certain modifications of its body, and thereby represents the whole universe, because of the interconnection of all matter in the plenum. But this is not all the soul represents about its body; it also represents the body's distinctness profile. That is, it not only represents *what* the body represents, but *how well* it represents these things. Leibniz has the former representations in mind when he affirms the instrumentality thesis, I suggest, for a soul represents other bodies through representing *what* its body represents. But when he asserts the priority thesis, he is thinking of the latter representation. A monad perceives its own body more distinctly in the sense that it perceives *how well* its body represents things—in short, its body's distinctness profile—more distinctly than it represents the distinctness profiles of any other bodies. That is, it expresses the content of its own body's distinctness profile more explicitly than that of any other body's distinctness profile. We can see why this is so by observing that a mind can deduce more from a consideration of its perceptions about the representational states of its body than it can deduce about those of any other body. Since the mind's distinctness profile corresponds exactly to that of its body, it can deduce a great deal of information about what its body must be expressing distinctly and what it must be expressing only clearly but confusedly. By contrast, my soul represents the distinctness profiles of all other bodies too, but none as distinctly as it represents my own. I would have to look much deeper into my soul in order to extract as much information about the distinctness profiles of other bodies as I can infer about my own, since I represent the contents of those profiles to some degree only implicitly. The explicit content view therefore allows for a plausible reading of the priority thesis that simultaneously coheres with the instrumentality thesis; in so doing, it satisfies the second of our desiderata.

4.3.3 Understanding and Sensing

The fundamental difference between understanding and sensing concerns the quality of knowledge they provide. On the one hand, Leibniz holds, we understand something when we are not only acquainted with it, but grasp its true nature. Thus, he believes that the

quality of warmth “will only be adequately understood when we explain of what it consists or distinctly describe its proximate cause—perhaps the expansion of air, or rather some particular motion of a fluid which is thinner than air” (L 285). On the other hand, when we sense something, we come to know that thing, but not what it is or in what it consists. As Leibniz explains in his best-known letter to Sophie Charlotte,

We use the external senses as a blind man uses his stick, following the comparison used by an ancient writer, and they allow us to know their particular objects, which are colors, sounds, odors, flavors, and the tactile qualities. But they do not allow us to know what these sensible qualities are, nor what they consist in, for example, whether red is the rotation of certain small globes which, it is claimed, make up light, whether heat is a vortex of very fine dust, whether sound is produced in air as circles are in water when a stone is tossed in, as some philosophers claim. We do not see these things, and we cannot even understand why this rotation, these vortices, and these circles, if they are real, should bring about exactly the perceptions we have of red, heat, and noise. Thus it can be said that *sensible qualities* are in fact occult qualities, and there must be others *more manifest* that can render them more understandable. Far from understanding only sensible things, it is precisely these we understand the least. And although they are familiar to us, we do not understand them any better for it, just as a pilot does not understand the nature of the magnetic needle that turns toward the north any better than anyone else does, though it is always before his eyes in the compass, and as a result, it hardly astonishes him.

As this passage makes clear, our sense perceptions do not allow us to understand sensible qualities such as colors, odors, and flavors because though they allow us to know the qualities themselves, they do not give us any grasp of the true natures of those qualities. To understand such a quality would be to grasp what is real in it, or what is its objective foundation. To understand red, for example, would be to grasp that it consists in some more fundamental quality of red objects, say a certain surface spectral reflectance. Yet our perceptions of red give us no clue about what that quality really consists in, and this is why we understand sensible things the least, even though they are among the most familiar (cf. T §§5, 41).

We understand something when we grasp its nature, but we grasp its nature only to the extent that we can grasp the composition of our perceptions of that thing. In order to understand that green is really a mixture of yellow and blue, for example, I would have to be able to “see” that my perceptions of green are composed of or result from perceptions of yellow and blue. But as Leibniz points out, “we do not understand, but merely experience, that green arises out of yellow and blue” (L 287). Though the microscope may reveal to us that green is really a mixture of yellow and blue, and therefore give us a causal definition

of green, we still cannot see the mixture of yellow and blue *in* our perception of green, which is the sort of thing required for understanding. Leibniz calls this kind of resolution of a thing into its ingredients “resolution by sense” and distinguishes it from what he calls definition or intellectual resolution, in which “one understands that which is described when the ingredients of the description are understood” (ibid). When we resolve something by sense, Leibniz holds, it does not cease to be confused, because we do not apprehend how it arises from its ingredients. In the case of green, for example, “We do not grasp how the third color is given us through the confused appearance of these two colors.” But when we resolve something intellectually, we not only discover its ingredients but we apprehend them *as* ingredients of that thing; in short, we come to understand it. Thus, “we understand though we may not experience that a square is made by two right isosceles triangles joined by a common hypotenuse and lying in the same plane or that from two odd numbers there arises an even number” (ibid). In such cases we do not merely *sense* that the squares have as ingredients two isosceles triangles or that two odd numbers are always ingredients in an even number; rather we grasp this intellectually insofar as we possess a (nominal) definition or analysis of the concepts *square* and *even number*. In short, we understand it (cf. NE 173).

By now it should be clear how my favored account of distinctness fits in here. We understand something to the extent that we grasp its true nature, which requires being able to grasp its constituents. We can do this only to the extent that our perceptions of that thing are such as to allow us to distinguish their ingredients. I can analyze or define a thing only to the extent that I can distinguish the ingredients within my perception of that thing, or equivalently, to the extent that I can distinguish the ingredients within my concept of that thing, which is the immediate internal object of my perception of it. On the account I have been defending, a confused perception is one that has ingredients most of which cannot be distinguished by the perceiver (because its ingredients are not very distinguished), and this is exactly what sensing involves.

This account also allows us to understand why Leibniz thinks necessary truths must be perceived distinctly and by the understanding, whereas contingent ones come from the

senses.¹⁰ For on his view necessary truths differ from contingent ones in that the former can be analyzed in a finite number of steps, whereas the latter would require an infinite analysis, something we are incapable of carrying out.¹¹ When we perceive a truth of reason, then, we are perceiving something that can be analyzed, and therefore our perception is one the ingredients of which can be distinguished. Contingent truths cannot be analyzed, though, at least in the sense that no matter how far we might analyze them, we would still fall infinitely short of a complete analysis, so our perceptions of those truths will likewise have a content that is mostly only implicit. Necessary truths therefore come from the understanding, that is, they are perceived distinctly, whereas contingent truths come from the senses (i.e., are perceived confusedly).

Our third desideratum was that our account shed light on Leibniz's proposed reductions of understanding to distinct perception and sensing to confused perception. This too has been satisfied admirably by the explicit content view.

4.3.4 Freedom and Bondage

An account of distinct perception should also render intelligible the connection between distinctness and freedom. We can begin to grasp this connection by recalling that on Leibniz's view freedom requires an act of understanding. For understandings, as we have just seen, are actually distinct perceptions. To grasp the connection adequately, however, we need to answer a further question: Exactly what sort of distinct perception does freedom involve, and why?

We might be tempted to answer this question in the following way. Leibniz believes that we are always determined to act in accordance with our strongest inclinations, which come either from the direction of reason, when after deliberation we represent some end as the best, or from passions and instincts, when we are moved by (the inclination arising from)

¹⁰“In my opinion [Locke] has not adequately distinguished the origin of necessary truths, the source of which is in the understanding, from that of truths of fact, which we draw from the experiences of the senses, and even from confused perceptions that are in us” (NE 75); “Intellectual ideas, which are the source of necessary truths, do not come from the senses But the ideas that come from the senses are confused, and the truths that depend on them are too, at least in part; by contrast, intellectual ideas and the truths depending on them are distinct, and neither the ones nor the others have their origin in the senses, though it is true that we would never think of them without the senses” (NE 81); etc.

¹¹For more on this, see AG 28-29, 95-100; OE §14; M §§33-37.

some confused perception. Thus:

God or a perfectly wise person will always choose the best that they know of, and if one side were not better than the other, they would choose neither the one nor the other. The passions often take the place of reason in other intelligent substances, and we can always assert, with respect to the will in general, that *choice follows from the greatest inclination* (by which I understand both passions and reasons, true or apparent). (AG 194)

... we always follow, in our willing, the result of all the inclinations that come from the direction both of reasons and passions, and this often happens without an express judgment of the understanding. (T §51; cf. AG 29)

Now, to the extent that we act for a reason rather than because of some passion, Leibniz holds, we are free. But we act for a reason only when we deliberate about our situation and, as a result of that reasoning, represent to ourselves some option as the best. Hence, we might suppose that the distinct perception required for freedom is this representation of the best. For that representation, being a deliverance of the practical understanding, the thought goes, is bound to be distinct. This story seems plausible enough on its face, but a closer look reveals a major flaw. Consider that this explanation requires my representation of such-and-such as the best—in effect, my perception of the proposition *that such-and-such is the best* as a truth—to be a distinct perception. But as we have seen, the only truths perceived distinctly are necessary ones. Hence, if this explanation were correct, then our representations of the best would always be truths of reason, since truths of fact are always perceived only confusedly. But this would mean that we are only free when we are motivated by some necessary truth, or alternatively, that willing consists in acting in accordance with some truth of reason. To the contrary, the products of our deliberation are often only truths of fact. Suppose I am debating whether to go to the gym for a workout, or to forego the workout in order to grab a bite to eat before class. On the one hand, I want to go to the gym because one of my chief long-term goals is good health, and I believe that exercise contributes significantly to that goal. On the other hand, going to the gym instead of eating will mean showing up to class on an empty stomach, and if I choose that route, experience teaches me, I will be unable to concentrate adequately and my teaching performance will suffer. Yet being a good teacher is also a goal of mine, and so I want to eat something before class. After some deliberation, I conclude that it would be best for me to eat rather than to exercise. For I can

go to the gym tomorrow at virtually no cost—I have no classes—and exercising tomorrow will promote long-term good health just as much as going today. Thus if I eat today and exercise tomorrow, then I will not have to sacrifice either of my goals. So this is the option I come to represent as the best. This seems to be precisely the sort of deliberation required for genuine freedom, and presumably Leibniz would agree that so long as I am moved by my deliberations (by my reasons, that is) and not purely by some passion (e.g., hunger), then I am genuinely free. But notice that the result of my deliberation, namely that it would be best for me to eat rather than to exercise, is only a truth of fact. (God could have made it the case that my survival requires daily exercise, and then my best option would have been to exercise rather than to eat, since survival is presumably more important than job performance.) So this perception cannot be distinct, because truths of fact are perceived only confusedly. It cannot be, then, that freedom requires a distinct perception because we are free only when we are moved by a distinct representation of the best. As the example appears to show, we are sometimes free even when we are moved by confused perceptions of the best.

The connection between freedom and distinct perception, I want to suggest, occurs farther upstream. It clearly stems from the fact that freedom involves deliberation. But the relevant distinct perception is not the representation of good that *results* from the deliberation; it is rather a representation that is necessary for the deliberation. Deliberation is a form of reasoning, and as such, it involves perceiving the connections between truths. According to Leibniz, these connections, which are in effect rules of inference, themselves constitute necessary truths, even when the truths they relate are only contingent (NE 475-76). So even if the considerations factoring into our deliberations are perceived only confusedly, those deliberations themselves will nevertheless require distinct perceptions of the rational connections between those truths. In this way, deliberation requires a distinct perception, and since freedom requires deliberation, we can be free only when we perceive distinctly. We can also put the point this way. Freedom consists in acting for a reason perceived by the intellect (L 289). But to have a reason is to grasp the connection between some better known truth and a suitably related lesser known one, which we do through a distinct perception. Acting for a reason, then, requires having a distinct perception. By contrast, we are unfree in just

those cases where we cannot give a reason for what we do. In such situations, we are moved by an inclination arising solely from confused perceptions, and there is no distinct perception through which we grasp a reason. Suppose that in the situation described above, I neglected to deliberate and simply acted in accordance with my strongest passion, being moved by the desire arising either from my hunger or from my feeling the need for exercise. In this case, I would be motivated by a non-rational inclination arising solely from confused perceptions, and on Leibniz's view I would be in bondage to the body. So I am free just in case my prevailing inclination arises from a distinct perception, namely of the reason for what I do, and in bondage just in case that inclination arises solely from confused perceptions.

The explicit content account does not appear prominently in this explanation, but it plays its part nonetheless inasmuch as it explains why the perception of the rational connection between (i) our belief that such-and-such is the best available option and (ii) those truths that collectively provide a reason for that belief must be distinct. The explanation, again, is that since such connections constitute necessary truths, they will be finitely analyzable and thus perceptions of them will have ingredients that can be distinguished. In this way, the explicit content account satisfies the fourth of our desiderata.

4.3.5 Action and Passion

A successful account should also allow us to explain the connection between perceptual distinctness and activity. What follows is my attempt at such an explanation. By the end, the role of the explicit content view will be apparent.

Genuine interaction among simple substances, Leibniz insists, is impossible. But there is a real difference between those things we consider causes and those we regard as effects. Hence, something else must be going on when we take one substance to be active, another passive, something that pre-critically we mistake for genuine interaction. What could this something else be? If we reflect carefully on the matter, Leibniz would say, we will see that what is characteristic of a "cause" of some change is that it more readily provides us with a reason or explanation for that change's occurrence. Consider a version of his favorite example of interaction: the boat moving through water. (These are not substances, admittedly, but

that is beside the point, since even in non-substances causes provide reasons for their effects.) Suppose that at time t_0 the boat is moving toward a patch of water that is (virtually) at rest, and that at t_1 , the boat is moving through that patch of water while the water swirls around the boat in some complicated fashion. Now suppose we are asked why at t_1 , the boat is moving and the water swirling. What reason or explanation can we give? Well, if we consider the state of the boat at t_0 , we can explain both why the boat is moving at t_1 and why the water is swirling at t_1 . Specifically, the boat is moving at t_1 because (i) it was moving at t_0 and (ii) whatever is in motion tends to remain in motion. So the boat's state at t_0 explains its state at t_1 . By contrast, the water's previous state does not readily explain its swirling at t_1 . If we want to explain why it suddenly began swirling around the boat at t_1 , we will look in vain for that explanation in the states of the water itself. (The explanation is there, on Leibniz's view, but finding it would require much deeper penetration into the states of the water.) But notice that we can find an explanation in the states of the boat. The state of the boat at t_0 explains its movement through the water at t_1 , and the boat's movement at t_1 in turn explains the water's swirling at that time, since the boat could not move through the water if the water were not simultaneously swirling. So, the prior state of the boat explains the states at t_1 of both itself and the water. And the same, Leibniz thinks, will be true in any case where we have good reason to think that one thing is causing or acting on another. Thus, since substances cannot really interact, there must be nothing more to action than making a reason for the changes taking place more readily available. But a substance more readily provides a reason, or what is the same, gives a more intelligible explanation, when it expresses the content of that reason more explicitly, that is, more distinctly. So in this way the explicit content account helps us see the connection between activity and relatively distinct perception.

4.3.6 Awareness

There is still one sort of context involving distinct perception for which my view has not, and apparently cannot, account: those contexts in which he associates distinctness with awareness. As I noted earlier (§3.2), it cannot be denied that he sometimes uses 'distinct'

to mean something like ‘distinguished’ or ‘apt to be noticed’. For example, he says that since in death “the cessation of the functions of the soul is only apparent, because there are no remarkable perceptions,” we err when we take “the cessation or rather suspension of distinct thoughts for a cessation of all thoughts” (G VI 516). Clearly the suggestion is that a distinct thought is a remarkable perception. In such contexts, then, he cannot have the explicit content sense of distinctness in mind. According to that sense, a perception is distinct just in case it is not only distinguished but has distinguished ingredients. But many quite distinguished perceptions have few if any distinguished ingredients, paradigmatic examples being perceptions of sensible qualities. They are distinct in the former sense, since they are distinguished, but not in the latter sense, because their ingredients are rather undistinguished. Hence, the explicit content view cannot account for these contexts in which Leibniz links distinctness to awareness, and confusedness to lack of awareness.

One reaction to this situation would be to follow Brandom’s lead, augmenting my account with a second, perhaps derivative, sense of distinctness to handle these special contexts. I could maintain, for instance, that on Leibniz’s considered view, a perception is distinct in the primary sense when it has distinguished ingredients, and in the secondary sense when it is itself distinguished. Understood in this way, my view would account for everything Leibniz says about distinct perception (ignoring, still, the two issues discussed in §3.1.6). This is not my reaction, however. My view is rather that these awareness contexts are instances of carelessness on Leibniz’s part, and that when he speaks carefully and accurately, he always has the explicit content sense of distinctness in mind. I can offer three reasons for favoring this approach to that of a two-part account. First, Leibniz himself never explicitly acknowledges that he uses the term ‘distinct perception’ in more than one sense. Yet if he had self-consciously equivocated in this way, we would expect him to have called our attention to that fact. (In itself this reason is admittedly somewhat weak, since philosophers, even great ones, do not always do what we expect, but I mean for it to be taken as part of a cumulative case.) Second, it is not hard to see why Leibniz might occasionally slip in this way. If I am right, his considered view is that perceptions are distinct just in case they have distinguished ingredients, and the slip would occur when he takes perceptions to be distinct just in case they are themselves distinguished. The jump from one locution to the other,

though significant, is not a big one, and we can easily imagine him carelessly shifting from one to the other. Finally, and most significantly, these awareness contexts occur far less often than we have been led to believe. Leibniz himself fairly consistently distinguishes between ‘*distincte*’ and its cognates, on the one hand, and ‘*distingué*’ and its cognates, on the other, and it is the latter that he usually associates with awareness. Translators, however, have tended to run these terms together, rendering both with ‘distinct’ and thereby obscuring the distinction. Here are some examples.

1. Ariew and Garber translate *Monadology* §24 as follows:

From this we see that if, in our perceptions, we had nothing distinct [*distingué*] or, so to speak, in relief and stronger in flavor, we would always be in a stupor. And this is the state of bare monads. (AG 216; cf. Rescher 1991, 101)

Read in this way, the passage seems to support the suggestion that ‘distinct’ means ‘distinguished’. But in fact Leibniz intends to suggest no such thing.

2. In support of a connection between distinctness and consciousness, Simmons (2001, 53) cites this text from the *New Essays* (her translation):

We are never without perceptions, but, necessarily, we are often without conscious perceptions [*apperceptions*], namely when there are no distinct [*distinguées*] perceptions. (NE 162; cf. La 166; Brandom 1981, 147)

No such connection is being indicated, however.

3. Multiple examples of the conflation appear in Remnant and Bennett’s popular translation of the *New Essays* (though, oddly, they get the previous text right):

... death can only be a sleep, and not a lasting one at that: the perceptions merely cease to be sufficiently distinct [*distinguées*]; in animals they are reduced to a state of confusion which puts awareness into abeyance but which cannot last forever (NE 55)¹²

Bear in mind that we do think of many things all at once, but pay heed only to the thoughts that stand out most distinctly [*qui sont les plus distinguées*]. . . . Death itself cannot affect the souls of animals in any way but that; they must certainly regain

¹²It may be thought that Leibniz’s characterization of death as a state of confusion lends support to the rendering of ‘*distinguées*’ as ‘distinct’. However, it could be that death is a state of confusion in the sense that all the animal’s perceptions are being confused together, as it were, into one big undifferentiated mass of perceptions; in that case, this mass would be confused in the sense that its ingredients are not distinguished. Cf. MP 147: “confusion is when several things are present, but there is no way of distinguishing one from another.”

their distinct [*distinguéés*] perceptions sooner or later, for everything is orderly. (NE 113; cf. La 113)

As I have said, it cannot be denied that Leibniz sometimes uses ‘distinct’ to mean ‘distinguished’. But translations such as these give us an exaggerated impression of how often this occurs. In fact, I believe that such uses are relatively rare, and that in a large majority of cases ‘distinct’ carries the sense of ‘explicitly contentful’. In view of this, together with the other considerations cited above, it seems best to conclude that in Leibniz’s considered philosophy, there is only one sense of distinctness (the explicit content sense), but that he sometimes departs from this sense through carelessness.

4.4 CONCLUDING REMARKS

This completes my main case for the explicit content view of perceptual distinctness. I have tried to show that it enjoys significant textual support and at the same time has great explanatory power. On the latter head, specifically, it (i) explains how monads could differ in their perceptions even though they perceive all the same things; (ii) allows us to reconcile the priority and instrumentality theses, the former being understood as the claim that a monad perceives the *distinctness profile* of its own body more distinctly than that of any other monad; (iii) reveals why Leibniz believes understanding and sensing to be nothing more than distinct and confused perception, respectively; (iv) explains why necessary truths must be grasped through the understanding, and contingent ones through the senses; (v) illuminates the connections between distinct perception and freedom, and between confused perception and bondage to external things; (vi) shows why that thing with the more distinct expression of the reason for some changes is bound to provide a more accessible and contentful explanation for them. In view of these points, the case for the explicit content view appears rather strong.

Two loose ends remain from the previous chapter. First, I concluded there that if a plausible unified account of distinct perception is possible, then any view on which distinctness involves awareness will have to be judged unacceptable. Given the argument of this chapter,

we are now in a position to affirm this antecedent and therefore to reject such views. Of course, if I am wrong about the awareness contexts being instances of carelessness, then I will need to supplement my account with some such view; that does not appear to be the case, however. Second, in evaluating Brandom's inference-centered account I promised to provide a more acceptable alternative, namely one that has at least as much explanatory power as his account, but considerably more textual support. If I am right, the foregoing considerations establish that the explicit content account delivers on both counts, and hence should be preferred to Brandom's view.

5.0 DISTINCT IDEAS

With an account of distinct and confused perception now in place, we turn to the question of what Leibniz means by ‘distinct’ and ‘confused’ in application to ideas (and concepts). According to what can justly be called the *standard view*, the distinctness and confusedness of ideas differs significantly from that of perceptions. In §5.1, I elaborate on this perspective and present several considerations which can be offered in its support. I then criticize that view in §5.2, arguing for the thesis that ideas are distinct and confused in precisely the same sense as perceptions, namely, in the sense that their content is (on the whole) either explicit or implicit. In §5.3, I revisit the arguments for the standard view and show why each fails. In §5.4 I discuss two inconsistencies to which Leibniz allegedly falls prey in his account of confused ideas, and a prominent diagnosis, due to Margaret Wilson, of where he goes wrong. After casting doubt on that diagnosis, in §5.5 I challenge the charges of inconsistency. On my view, Leibniz is not inconsistent but merely misunderstood. The key idea introduced in his defense will be what may be called the doctrine of the redundancy of ideas, a thesis not noticed by commentators but critical to understanding his view.

5.1 THE STANDARD VIEW

The essence of what I am calling the standard view is that conceptual distinctness differs significantly from perceptual distinctness, whatever one holds that to be. Proponents of this view disagree about the nature of the latter sort of distinctness, some taking it to consist in a perception’s being conscious, distinguished, or noticeable (Furth, McRae, Parkinson, Simmons), others in inference potential (Brandom) or rational priority in the mind of God

(Wilson). But they unite in holding that Leibniz has none of these senses of distinctness in mind when he calls *ideas* and *concepts* distinct. They hold that conceptual distinctness has to do with a certain level of conceptual ability, naturally enough, but that perceptual distinctness does not. In Leibniz's terminology, an idea is *clear* just in case we can recognize its object and distinguish that object from other kinds of things. For example, if I am an expert at recognizing elms and distinguishing them from other sorts of trees, such as maples and pines, then on Leibniz's view I could be said to have a clear idea of the elm. Clear ideas can be either distinct or confused. An idea is clear but *confused*, according to him, when it allows one to recognize and distinguish its object, but not to enumerate the distinguishing properties or marks of that thing. Thus, if I am good at recognizing elms when I see them, but cannot say how I am able to do this—cannot say what properties of the elm distinguish it from other kinds of trees, that is—then Leibniz would say that my idea of the elm is clear but confused. Finally, a clear idea is *distinct* if it allows one to state the distinguishing marks of that object. (To state these marks, according to Leibniz's terminology, would be to give a *nominal definition*, so he often puts the point by saying that a distinct idea allows us nominally to define its object.) To use Leibniz's favorite illustration, this is the sort of idea an assayer has of gold, since the assayer knows that something is gold if and only if it resists cupellation and *aqua fortis*, is the heaviest and most malleable material, and so forth.¹ The upshot of all this is that distinctness and confusion (as well as obscurity and clarity), as applied to concepts, pertain to levels of conceptual ability. But by all accounts, perceptual distinctness and confusion do not. Leibniz must therefore have two notions of distinctness and confusion, applicable respectively to concepts and perceptions.

This view has been propounded by a number of scholars in recent decades. In his influential study on perception, apperception, and thought in Leibniz, for instance, McRae writes: “*Distinct* and *confused* are basic terms in Leibniz's account of ideas or concepts. They are also basic in his account of perceptions. Because he is emphatic about the necessity of distinguishing between ideas and images . . . , we must avoid infusing these terms, as applied to auditory, visual, and tactile images, with any meaning derived from the same terms as applied to ideas” (1976, 36). McRae indicates elsewhere in the book (29) that he

¹Cf. AG 24; NE 267, 299, 311-12.

takes ‘image’ to be equivalent to ‘sensation’ or ‘sense perception’, so what he is urging here is that we be careful not to confuse the distinctness and confusedness of concepts with that of perceptions.² Toward the end of the study, he reaches this conclusion: “Distinctness of perceptions is an exact correlate of the distinctness in ‘impressions’ or ‘traces’ in the organs of sense which those perceptions express, while the distinctness of a concept is a function of definition, which, in its perfected form, would consist in an exhaustive logical analysis of the concept. Conceptual distinctness and confusion have only an analogical or metaphorical relation to ocular or acoustical distinctness and confusion” (128). Another important proponent of this viewpoint is Margaret Wilson. As she sees it, “Leibniz fairly consistently observes a distinction between *concepts* on the one hand, and *particular presentings* on the other hand. . . . That is, Leibniz defines ‘confused’ and ‘distinct’ in one way to distinguish different levels of conceptual ability, and in another way to distinguish (alleged) features of perceptions” (322).³ Again, “when Leibniz talks of distinct or confused *notions* or *ideas*, he has in mind questions about conceptual abilities” (324). But when he speaks of perceptions (i.e., “particular presentings”) being distinct or confused, he has something very different in mind, apparently that the perceptions either are or are not noticeable. Other advocates of the standard view include Brandom (1981, 151ff.), Parkinson (1982, 15), Bennett (2001, 308), and Simmons (2001, n.41).

Let us consider in more detail the considerations that appear to favor this reading. We have already encountered the basic argument for the standard view, namely this:

First Argument. Leibniz’s characterizations of conceptual and perceptual distinctness reveal that the former has to do with a certain level of conceptual ability, and that the latter does not. Hence these are different notions of distinctness.

To this we may add three other arguments, the first two due to Brandom.⁴ First, observe

²McRae correctly observes that Leibniz is “emphatic about the necessity of distinguishing between ideas and images” (cf. NE 261-63, 487), but he mistakenly infers from this that on Leibniz’s view images are not ideas. Consequently, he is forced to conclude that Leibniz errs in those passages in which he characterizes images as confused ideas (NE 451, 487). A closer look reveals that Leibniz only means to distinguish images from *distinct* or *exact* ideas. The distinction between ideas and images, that is, is none other than that between distinct and confused ideas.

³Wilson actually seems to have two parallel distinctions in mind here: the distinction between concepts and perceptions, and the distinction between the two kinds of distinctness and confusion applicable to each.

⁴Brandom gives two other arguments for the standard view, which I do not discuss in the text because I am unable to see how they provide any support for that position. The conclusion of the first is that only

that conceptual distinctness presupposes the possession of reason, since only a rational being can articulate the distinguishing marks of a thing. Yet according to Brandom, all monads have perceptions which are distinct at least to some degree, and moreover souls in general are capable of distinct (distinguished) perceptions, since such perceptions are required for apperception. Hence, these perceptions cannot be distinct in the sense in which concepts are, because on Leibniz’s view only minds have a faculty of reflection. Second, Brandom argues that the difference between perceptual distinctness and confusion is merely *quantitative*, whereas conceptual distinctness and confusion differ *qualitatively*. Leibniz, he claims, views *perceptions* as forming a continuum ranging from the maximally confused to the maximally distinct.⁵ *Ideas*, however, do not form such a continuum. The difference between distinct and confused ideas corresponds to the difference between ideas of reason and ideas of sense (or in Scholastic terminology, between intelligibility and sensibility), and this difference is not, like the difference between distinct and confused perceptions, merely one of degree. Thus either the idea allows us to define its object, in which case it is distinct (i.e., an idea of reason), or it does not, in which case it is confused (i.e., an idea of sense). “Between these,” Brandom contends, “there are no intermediate degrees” (1981, 153). The distinctness of concepts must therefore be quite different from the distinctness of perceptions. We can summarize these two arguments as follows:

Second Argument. Conceptual distinctness presupposes a faculty of reflection, whereas perceptual distinctness does not. These must therefore be different kinds of distinctness.

minds can have distinct ideas; even if this is granted, however, it does not show that the distinctness of ideas differs from that of perceptions. Perhaps non-rational monads can have perceptions that are distinct in the same sense in which some of a mind’s ideas are distinct, even though these former monads cannot have such ideas. Or perhaps, as I think, non-rational monads cannot have distinct perceptions, though (i) they do have confused perceptions which are confused in the same way as many ideas are confused, and (ii) these perceptions are often distinct to some (small) degree, in the sense of ‘distinct’ that applies to ideas.

The other argument I am not discussing in the text has as its conclusion the thesis that “distinct perceptions cannot [always] be the actualizations of distinct ideas” (153). The essence of the argument is this. An actualization of a clear idea involves awareness and thus requires a distinct (distinguished) perception; that is, an actualization of a clear idea of *O* requires a distinct (distinguished) perception of *O*. Thus, a distinct perception of *O* cannot be the realization of a distinct idea of *O*, because it is possible to have a clear idea of *O* without having a distinct idea of *O*. A critic of the standard view, however, could concede this point and still reject any intrinsic distinction between conceptual and perceptual distinctness. The fact that distinct perceptions do not stand to distinct ideas as acts to potencies does not entail that the two kinds of thing are distinct in different senses. The argument could also be challenged on the ground that the notion of perceptual distinctness it employs does not accord with Leibniz’s considered view, being a product of his occasional carelessness (see §4.3.6).

⁵Bennett (2001, 310) and Anapolitanos (1999, 32) concur.

Third Argument. Distinct and confused perceptions form a continuum and differ only quantitatively. Distinct and confused ideas, however, differ qualitatively and do not form a continuum. Hence, conceptual distinctness and confusedness must differ from the distinctness and confusedness of perceptions.

Our fourth and final argument is available only to defenders of a certain version of the standard view. The essence of that position, as I have said, is that conceptual distinctness is a matter of a certain level of conceptual ability, and therefore differs from perceptual distinctness. There is room for disagreement here, however, concerning the precise relationship between concepts and conceptual capacities. One might hold that concepts merely *underwrite* or *endow* these capacities, and thus that terms such as ‘clear’ and ‘distinct’, applied to concepts, specify what basic kinds of conceptual abilities are underwritten. To say that a concept is *clear*, on this view, would be to say that it endows a subject with the ability to recognize and distinguish the object of that concept. Clarity, that is, would be the property of underwriting such abilities. Similarly, to call a concept *distinct* would be to affirm that it underwrites the capacity for giving a nominal definition of its object, distinctness being the property of endowing such a capacity. Yet according to some commentators, Leibniz’s concepts do more than merely underwrite conceptual capacities; they *are* such capacities.⁶ A clear idea of *F*, they contend, is nothing more than the ability to recognize *F*s and to distinguish them from non-*F*s, and a distinct idea of *F* is just the capacity to enumerate the distinguishing marks of *F*. From this perspective, to call a concept (i.e., a conceptual capacity) clear or distinct is to specify what *kind* of conceptual capacity it is, conceptual clarity being the property of being a *recognitional* ability, and distinctness the property of being a *definitional* ability. This reading draws support from those texts, discussed in §2.3.2, in which Leibniz characterizes concepts (ideas) as abilities (L 207 [13]; NE 52). Considering these texts together with those in which he links the various grades of concepts (clear, dis-

⁶McRae writes that “the *capacity to recognize* an instance is not just a criterion for determining whether one has the clear idea or not, but the capacity *is* the clear idea” (1976, 74; cf. 129). Similarly, though he does not say so explicitly, he undoubtedly takes distinct ideas to be nothing more than the ability give nominal definitions. Margaret Wilson characterizes the distinction between concepts and perceptions as “the distinction between the categories of conceptual abilities and perceptions” (1977, 331), thus implicitly identifying concepts with conceptual abilities. She does so again when she speculates that Leibniz might sometimes use ‘confused’ to mean something like unconscious, even in connection with ideas, in which case, she concludes, he “might be prepared to speak of ‘confused ideas’, in the sense of implicit or unrecognized conceptual abilities” (325).

tinct, etc.) with levels of conceptual abilities naturally suggests the thought that he means concepts to be understood specifically as *conceptual* abilities. One could argue, then, that this second reading allows for the integration and harmonization of two sets of passages that would otherwise seem orthogonal.

What is important for our purposes here is that proponents of this second perspective can offer an additional argument for the standard view:

Fourth Argument. Conceptual distinctness is the property of being an ability to give a nominal definition, and this property could only be exemplified by conceptual abilities. Hence, from the fact that Leibniz thinks perceptions are not capacities (conceptual or otherwise), we can conclude that they must be distinct in some other sense.

Together these four arguments make a formidable case for the view that ‘distinct’ and ‘confused’ mean one thing when applied to perceptions, another when applied to concepts. Little wonder the view has become standard.

5.2 AN ALTERNATIVE PROPOSAL

I believe that proponents of the standard view are right to see a close connection between the distinctness of concepts and a certain level of conceptual ability, namely the ability to give a definition. But I want to deny that this has as a consequence that perceptions must be distinct or confused in some other sense. On my view, perceptual and conceptual distinctness are one and the same property. As with perceptions, the distinctness applicable to ideas consists in explicitness of content. To say that an idea is distinct, for Leibniz, is not to say that it is or underwrites a certain kind of conceptual ability. (Distinct ideas do underwrite such capacities, but their distinctness does not consist in this underwriting.) To affirm that an idea is distinct is rather to say that the idea has explicit content, that is, that its ingredients can be distinguished from one another by the mind the idea modifies. It is for this reason that Leibniz writes that our ideas of sensible qualities “are clear, because we recognize them and easily tell them from one another; but they are not distinct, because we cannot distinguish their contents” (NE 255-56). Again, on his view our concepts of sensible qualities “are *clear*, for they help us to recognize the qualities, but . . . these same notions are

not *distinct*, because we can neither distinguish nor unfold what they contain” (AG 186-87). What prevents these ideas from being distinct, Leibniz says, is that we cannot discern their ingredients.⁷ The natural conclusion to draw from these remarks is that distinctness in ideas is the property of having explicit content.

Similarly, Leibniz holds that to call an idea clear but confused is to say that though the idea itself is accessible to the mind, its ingredients are, at least for the most part, not. In general terms, his view is that “confusion is when several things are present, but there is no way of distinguishing one from another” (MP 146). This applies to ideas as much as to perceptions. Thus, he holds that “sensible ideas appear simple because they are confused and thus do not provide the mind with any way of making discriminations within what they contain.” He illustrates this point by noting that the idea of green, though composed of the ideas of blue and yellow, is regarded as simple because we are unaware of any divisions within it (NE 120). That is, what makes an idea confused, according to this passage, is that we are unable to discern its ingredients within it. Similarly, Leibniz remarks that “We now have a complete analysis of green into blue and yellow, and almost all our remaining questions about it concern these ingredients; yet we are quite unable to discern the ideas of blue and yellow within our sensory idea of green, simply because it is a confused idea” (NE 403). Again, he holds that our notions of colors are confused because the colors’s “composition is not manifest in the sensation we have of them” (NS 105), and that we have a clear but confused knowledge of substance because “people know very well how to recognize it and distinguish it from an accident, even though they do not distinguish what it contains in its notion” (AG 287). The natural way to understand these passages, I submit, is as expressing the thought that conceptual confusion consists in the fact that there are ingredients present which cannot be distinguished by the subject.

Some defenders of the standard view have asserted (without argument) that in the *New Essays* Leibniz tends to follow Locke in using ‘perception’ and ‘idea’ interchangeably.⁸ If this were true, then many of the passages I have just cited in support of my view would be essentially worthless for that purpose, since his claims to the effect that “ideas” are confused

⁷In the margin of some notes concerning his correspondence with Jaquelot, Leibniz writes that “An idea is clear and distinct when we can understand all its parts” (G III 454).

⁸Cf. [McRae \(1976, 37n.15\)](#); [Wilson \(1977, 327\)](#).

in the sense that we cannot discern any divisions or complexity within them might actually be characterizations of perceptual rather than conceptual confusion. Several considerations render this old chestnut dubious, however. First, in general Leibniz seems unwilling to accommodate himself to Locke's terminology when it makes a difference, as it would in this case. In fact, he is often at pains to criticize Locke's use of words when it differs from his, as in this discussion of what it means to call an idea 'distinct':

According to this notion you give of a *distinct* idea, I do not see any way of distinguishing it from a *clear* idea. That is why I have been in the habit here of following the language of M. Descartes, according to whom an idea can be clear and confused at the same time, as are the ideas of sensible qualities . . . like those of color and warmth. They are clear, because we recognize them and easily tell them from one another; but they are not distinct, because we cannot distinguish their contents. . . . Thus, although according to us distinct ideas distinguish one object from another, so also do ideas which are clear though in themselves confused; so we do not call *distinct* all the ideas that are well distinguishing or that distinguish objects, but those which are well distinguished, that is, which are in themselves distinct and which distinguish in the object the marks which make it known . . . Ideas which are not like this we call 'confused'. (NE 255)

This appears to be anything but accommodation to Locke. Second, in the *New Essays* Leibniz distinguishes sharply between perceptions (or thoughts) and ideas, as he often does elsewhere (NE 119, 300). Third, there are some places in the *New Essays* where it would be implausible to suppose that Leibniz is merely adapting himself to Locke's idiolect. Of particular importance is Bk. II, Ch. xxix, in which Leibniz, alluding to his *Meditations*, summarizes his distinctions between obscure, clear, confused, and distinct ideas. Surely in this context he is not thinking of perceptions when he writes of ideas. Yet he remarks there that our ideas of sensible qualities "are clear, because we recognize them and easily tell them from one another; but they are not distinct, because we cannot distinguish their contents" (NE 255-56). Once again Leibniz (at least implicitly) characterizes confusion as a matter of being unable to discern the constituents in an idea, and surely here we can take his use of 'idea' at face value. These are powerful considerations; they make it difficult to take seriously the suggestion that Leibniz's remarks about ideas in the *New Essays* should not be taken at face value.

Commentators have almost universally understood those passages in which Leibniz links the terms 'obscure', 'clear', 'confused', and 'distinct' with various grades of conceptual ca-

capacity as giving *definitions* of those terms. This practice receives support from his remark that ‘confusion’ can be “taken in my sense to stand for the lack of an analysis of a notion which one has” (NE 258), since the lack of an analysis is equivalent to the inability to give a nominal definition. Also, Leibniz’s language sometimes suggests that he intends to be giving the *meanings* of these terms; he says for example that our ideas of sensible qualities are clear “*because* we recognize them and easily tell them from one another” (NE 255, emphasis added; cf. AG 187). If we say these are definitions, however, then we will apparently be hard pressed to reconcile these passages with those I have been discussing in which Leibniz talks about implicit and explicit content. We will be inclined to understand conceptual distinctness either as the property of underwriting a certain sort of conceptual ability, or else as the property of being such an ability, and in either case we will seem forced to say that that is not the sort of distinctness Leibniz has in mind when he speaks of distinct concepts as having explicit content.

The key to resolving this tension is to realize that Leibniz’s definitions of clarity and distinctness in terms of levels of conceptual ability are not *real* but merely *nominal* definitions. The difference, in essence, is that real definitions express the nature of a thing—they tell us what it really is—whereas nominal definitions merely provide us with distinguishing marks. Gold can be defined as the heaviest metal, for example, but that definition does not capture the essence of gold. If Leibniz were giving a real definition of conceptual distinctness when he links it with the ability to give a nominal definition, then, he would be affirming that this sort of distinctness consists in (or in the underwriting of) such an ability. (This is how previous commentators appear to have understood these definitions.) But as we have seen, he also views conceptual distinctness as consisting in explicitness of content. On this way of viewing the matter, then, Leibniz would be guilty of duplicity. I suggest, however, that we understand Leibniz to be giving only nominal definitions in these contexts. That is, I suggest that when Leibniz links the clarity and distinctness of concepts with levels of conceptual ability, he is not purporting to specify the nature of these properties, but only their distinguishing marks. He is setting forth the means for recognizing when our concepts have these properties, not telling us what it means for them to be clear or distinct. It is true that he does not always clearly distinguish clarity and distinctness from their respective marks,

and for this reason it is quite understandable that his readers have tended to confuse the properties themselves with the conceptual capacities that signal their presence. But there are good reasons to think that these capacities are only marks of these properties and do not enter into descriptions of the nature of the properties themselves. From this perspective, distinctness is the property of having explicit content, and the distinguishing characteristic of a concept with this property is that it allows us to give a definition of its object. Similarly, confusedness consists in having implicit content, and the mark of an idea with this quality is that though it may allow us to recognize and distinguish its object, it does not allow us to define it.

It may seem odd that Leibniz would make so much of the identifying features of conceptual clarity and distinctness. This appearance of oddity disappears, however, as soon as we appreciate the significance of his well-known criticism of Descartes's principle that whatever is clearly and distinctly perceived is true. It is important to realize that he does not object to the principle itself, or to the Cartesian conception of clarity and distinctness it presupposes. Indeed, he confides to Thomas Burnett: "It seems to me that my use of the terms clear and distinct does not depart from Descartes's, who is most responsible for making them fashionable" (AG 287; cf. NE 255). He protests rather that the principle "is useless unless we use criteria for the clear and distinct, criteria which we have made explicit, and unless we have established the truth of the ideas" (AG 26-27; cf. NS 142; CA 141; NE 219; ML 150). Of first importance here is Leibniz's insistence that we need explicit criteria for clarity and distinctness. Without these criteria, he claims, careless people are liable to mistake obscure and confused ideas for clear and distinct ones. If we can give explicit criteria for these notions, however, then people will be less likely to make such mistakes. In effect, Leibniz is suggesting that in order for Descartes's principle to be useful, we must be able to state marks sufficient for distinguishing the clear from the obscure, and the distinct from the confused; in Leibnizian terms, we must have a distinct understanding (or nominal definitions) of clarity and distinctness. Thus when he introduces his classic discussion of the grades of ideas in the *Meditations* with the comment that he aims to explain what "can be established about the distinctions and criteria that relate to ideas and knowledge" (AG 23), we should understand him to be announcing that he is going to propose distinguishing

marks of clarity and distinctness, that is, the sort of explicit criteria he faulted Descartes for failing to provide.⁹ This claim receives confirmation later in the essay when he remarks, in connection with the Cartesian principle that whatever is perceived clearly and distinctly is true, that “This axiom is useless unless *the criteria of clearness and distinctness which we have proposed* are applied and unless the truth of the ideas is established” (L 294; emphasis added), for the criteria he has in mind here could only be the levels of conceptual ability discussed earlier in the essay. On this reading, then, Leibniz is thinking along the following lines. Suppose we have an idea that seems to us to be clear and distinct. How can we be sure that this idea really is clear and distinct, in the basic sense of these terms given by Descartes? The answer: by checking to see whether we have the appropriate level of conceptual capacity. Can we recognize the object of that idea and distinguish it from other things? If so, the idea is clear, and if not, obscure. If the idea is clear, then are we able to enumerate marks sufficient for distinguishing the object of that idea from other things? If so, the idea is clear and distinct; otherwise it is clear but confused. In this way the levels of conceptual ability Leibniz associates with the various kinds of ideas take the guesswork out of assessing how to classify our various beliefs within the basic Cartesian framework.

Leibniz’s claim that his use of ‘clear’ and ‘distinct’ does not depart from Descartes’s is significant.¹⁰ From the perspective of the standard interpretation, this must appear to be a mistake, or at best a gross exaggeration, since Descartes never defines clarity and distinctness in terms of conceptual capacities. To the contrary, in the *Principles* he characterizes distinctness as the property a clear perception has when it is “so sharply separated from all other perceptions that it contains within itself only what is clear.” A clear perception, in turn, he defines as one that is “present and accessible to the attentive mind” (CSM I 207–8). Thus among those perceptions present and accessible to the attentive mind, the distinct ones are those which contain only perceptions that are themselves present and accessible to the attentive mind. Now, we know Leibniz was familiar with this characterization of distinctness

⁹Commentators have frequently observed that Leibniz faulted Descartes in this way, but what they have tended to miss is the significance of this move for understanding Leibniz’s association of conceptual clarity and distinctness with levels of conceptual ability.

¹⁰In an appendix to the *Theodicy* Leibniz says of his *Meditations*: “although I do not boast of having given therein a new discovery I hope that I have expounded things which were only confusedly recognized” (OE §5).

because we have his highly detailed notes on this part of the *Principles*, which by 1692 he had prepared for publication (see L 383ff, esp. 389). But given his familiarity with Descartes's position, it would be strange for him to write just seven years later that his usage did not differ from his predecessor's, if in fact for him distinctness had to do with the ability to give a nominal definition. By contrast, if Leibniz's notion of distinctness has to do with being able to discern the ingredients in an idea or concept, we can readily see why Leibniz thought he was preserving Descartes's usage. For to say that an idea's ingredients can be discerned is just to say that those ingredients are present and accessible to the attentive mind; we discern them by attending to them, and we *can* discern them if and only if they are accessible to the attending mind.¹¹ On my interpretation, therefore, we can make sense of Leibniz's claim that he is following Descartes's usage, whereas on the standard reading we cannot.

Further support for the view I am urging comes from the fact that on Leibniz's view, ideas, like perceptions, are more or less distinct to the extent that their content is more or less explicit. He is clear that "distinct knowledge has degrees" (DM §24; NE 487-88; La 17). A minimally distinct idea is one in which we can distinguish (at least most of) the first level of ingredients but no more: we can state the marks of the thing, but not the marks of those marks. An idea is more distinct to the extent that we are able to approach a complete analysis. Thus a perfectly distinct or *adequate* idea¹² would be one in which we are able to push the analysis to completion, arriving at primitive ideas. In other words, an idea is maximally distinct just in case its content is fully explicit, and less than maximally distinct to the extent that its content is not fully explicit. This corresponds very closely, if not precisely, to the sense in which, on my reading, perceptions admit of degrees of distinctness.

From Leibniz's perspective, then, a distinct idea is one in which we can discern the idea's ingredients, and the criterion or distinguishing mark of such an idea is the ability to give a nominal definition of its object. But why, we may ask, does he regard this level of conceptual ability as indicative of the presence of a distinct idea, that is, an idea in

¹¹Wilson observes that "on Leibniz's account sense perceptions do satisfy the original Cartesian conception of confusion. It is not the case that 'all that is in them' is clear to the perceiving mind" (1977, 325). The point I am making is that something even stronger is true: because for Leibniz sensory ideas are confused in the same way as sensory perceptions, *both* of these mental phenomena "satisfy the original Cartesian conception of confusion." Leibniz evidently recognized this point and that is why he remarked to Burnett that "my use of the terms clear and distinct does not depart from Descartes's" (AG 287).

¹²Cf. G III 256.

which the constituent ideas can be noticed? Conversely, why does he consider the inability to give a nominal definition a mark of the presence of an idea the ingredients of which cannot be detected? To answer these questions we must appreciate an important point that commentators have tended to miss: being able to state the distinguishing marks of a thing, on Leibniz's view, presupposes being able to discern the ingredients in the idea of that thing, because the ingredients themselves give us the marks of the thing in question. If an idea is distinct, then we will be able to discern its contents and therefore will be able to give a nominal definition of its object. By contrast, if an idea is confused, we will not be able to discern its components and consequently will not be able to state distinguishing marks for its object. That this is Leibniz's view can be seen clearly from this remark about ideas of sensible qualities:

They are clear, because we recognize them and easily tell them from one another; but they are not distinct, because we cannot distinguish their contents. Thus, we cannot define these ideas: all we can do is to make them known through examples; and, beyond that, until their inner structure has been deciphered we have to say that they are a *je ne sais quoi*. Thus, . . . we do not call 'distinct' all the ideas which are distinguishing (i.e. which distinguish objects), but only those which are distinguished, i.e. which are in themselves distinct and which distinguish in the object the marks which make it known, thus yielding an analysis or definition. Ideas which are not like this we call 'confused'. (NE 255)

Three things should be noticed about this passage. First, as I pointed out above, the first sentence of this text shows that an idea's distinctness consists in its being such that its contents can be distinguished. Second, Leibniz says that we cannot define sensible qualities precisely because our ideas of them are not distinct in this sense. That is, we cannot define these qualities just because we cannot discern the ingredients in our ideas of them. The rationale for saying this is evidently that the ingredient ideas themselves give the marks that would constitute a definition of the thing. Finally, after pointing out that distinctness involves being able to make out the contents of an idea, Leibniz says that distinct ideas "distinguish in the object the marks which make it known." They do this because in such ideas we can distinguish the constituent ideas, which give the distinguishing marks of the thing in question. For example, my idea of a "metal which resists cupellation and is insoluble in aquafortis" is, according to Leibniz, a distinct idea of gold. It is distinct, he says, because "it gives the criteria of the definition of 'gold'" (NE 266-67). We discern the ingredients

in this idea, and in doing so we discover that resistance to cupellation and insolubility in aquafortis are marks of gold. Anyone who possesses this idea will therefore be capable of giving a nominal definition of gold. Contrast this case with that of a confused idea, such as my idea of the color red. Unlike the assayer's idea of gold, this idea does not make explicit any reciprocal marks of red; it is not (and will never be) an idea of a something-with-such-and-such-properties, but of a "something-I-know-not-what that I sense very clearly, but cannot explain well" (AG 287). In other words, whereas a distinct idea can always be picked out by a description of the form "an idea of something with property X (and property Y, . . .)," where these properties are distinguishing marks, a confused idea cannot be picked out by such a description, because we cannot distinguish the contents of that idea and therefore cannot discover any properties possessed by its object. It is beyond our power to discern those ingredients in the confused idea, just as it is beyond our power to discern the minute, insensible perceptions in our sensible perceptions of that quality (cf. NE 256). Consequently, it is likewise beyond our power to give nominal definitions of these qualities, because on Leibniz's view doing so would require being able to distinguish the contents in our ideas of those qualities.

This suggests an objection. If the ingredients in an idea are just the ideas of its distinguishing marks, then are yellow and blue not marks of green, given that the ideas of yellow and blue are ingredients in our idea of green? If so, then we should be able to give a nominal definition of green as, say, a thorough mixture of yellow and blue. Yet Leibniz is adamant that we still cannot give a nominal definition of green, even after we learn that our ideas of yellow and blue are ingredients in our idea of green. On the one hand, he says that "It is obvious that green . . . comes from a mixture of blue and yellow; which makes it credible that the idea of green is composed of the ideas of those two colors" (NE 120). But on the other, he declares that "green can no more be given a nominal definition, through which it could be recognized, than can blue or yellow" (NE 297).¹³ Hence, giving a nominal definition must

¹³In a 1699 letter to Thomas Burnett, Leibniz writes that "whenever we have a good definition, we have a distinct idea, for example when I say that green is a mixture of blue and yellow. . . . The notion that we have of green, which is a more composed color [than blue or yellow], is not only clear, but also distinct, because it is accompanied by a definition or analysis, by which this notion is resolved into certain requisites or ingredients. But that of blue is only clear and not distinct. It is clear, because we can recognize that which is blue or not, without making a mistake; but it is not distinct, for without the understanding, we do not know distinctly in what this I-know-not-what that we sense there consists" (G III 256). Here Leibniz

require more than just knowledge of the ingredients of an idea.

The solution to this difficulty lies with the fact that the ingredients of an idea only provide us with distinguishing criteria when those ingredients can be discerned *in that idea*. If the ingredients are not explicit in the idea, they will not be giving us any criteria by which we could recognize the idea's object. Knowing that the ideas of yellow and blue are ingredients in our idea of green, for example, does not give us any distinguishing marks of green, for the simple reason that we can never notice any yellow or blue in our confused perceptions of green. This is why Leibniz explicitly acknowledges that the definition of green as a thorough mixture of yellow and blue does not rank as a nominal definition (*ibid.*). Similarly, alternating teeth and gaps do not constitute a distinguishing mark of continuously transparent rings, because we cannot discern the teeth and gaps in our confused perceptions of the spinning cog-wheel. However, if we could, *per impossibile*, detect the yellow and blue in our perceptions of green, or the teeth and gaps in our perceptions of the transparent ring, then these ingredients would give us the relevant distinguishing marks, and we would be able to give nominal definitions of these things.

I have been arguing (i) that on Leibniz's view, conceptual distinctness is the property of having explicit content or ingredients, and (ii) that he considers the ability to enumerate the distinguishing marks of a thing (i.e. to define it nominally) to be itself the distinguishing mark of a distinct concept. This position has two major advantages over the standard reading.

erroneously supposes that the definition of green as a mixture of blue and yellow constitutes a *nominal* definition, and therefore that his idea of green is distinct. He corrects himself some five years later in the *New Essays*, when he explains that "terms which are simple only from our point of view because we have no way of analyzing them into the elementary perceptions which make them up—e.g. terms like hot, cold, yellow, green—do admit of real definitions which would explain what causes them. Thus the real definition of *green* is to be composed of a thorough mixture of blue and yellow; though green can no more be given a nominal definition, through which it could be recognized, than can blue or yellow" (NE 297). As Leibniz makes clear here, the definition of green as a mixture of yellow and blue is a *real* definition because in explaining how green is caused it establishes that green is possible. (Inasmuch as it explains how green arises, it is a *causal* definition.) But it is not a nominal definition because the property *mixture of yellow and blue* is not a distinguishing mark of green, since we can no more discern this property in the greenness of things than we can discern the teeth of the cog-wheel in our confused perception of the transparent ring. Leibniz himself puts the point this way: "we now have a complete analysis of green into blue and yellow, and almost all our remaining questions about it concern these ingredients; yet we are quite unable to discern the ideas of blue and yellow within our sensory idea of green, simply because it is a confused idea" (NE 403). As this passage suggests, in the years following the letter to Burnett, Leibniz came to realize that possessing an analysis of green into yellow and blue does not change the fact that we cannot discern the ideas of those ingredients in our idea of green—that is, does not change the fact that the idea of green is confused—and therefore does not change the fact that we cannot give a nominal definition of green.

First, it allows us to harmonize those passages in which Leibniz associates distinctness with explicit content with those in which he associates it with the capacity to give a nominal definition. The former texts reveal the nature of distinctness itself, whereas the latter ones provide us with the sort of explicit criterion of distinctness that Leibniz repeatedly faulted Descartes for failing to give. The standard view, in contrast, does not sort well with the former passages, in which Leibniz assimilates conceptual distinctness to the distinctness proper to perceptions. Second, the view I am proposing has the advantage of theoretical simplicity: it allows us to explain the majority of his remarks about distinct perceptions *and* distinct ideas in terms of a single notion of distinctness, whereas the standard view requires two apparently unrelated kinds of distinctness in order to account for those same statements.¹⁴

5.3 THE ARGUMENTS FOR THE STANDARD VIEW REVISITED

At this point let us revisit the arguments for the standard view presented in the previous section. We have reason to suspect that their conclusions are false, but let us try to see what is wrong with their premises.

¹⁴Margaret Wilson considers Leibniz's alleged distinction between the confusion proper to perceptions and that proper to ideas to mark "a very fundamental advance" over Descartes's philosophy (1977, 322). In distinguishing between these two kinds of confusion, she argues, Leibniz is in effect drawing a sharp distinction between ideas and concepts on the one hand, and perceptions or particular perceivings on the other—a distinction which in her opinion constitutes "one of the more satisfactory and historically significant features of Leibniz's epistemology" (331) and indeed can even be "construed as an important and perhaps influential antecedent to Kant's celebrated distinction between intuitions and concepts" (322). Wilson is no doubt right that Leibniz wants to distinguish between ideas and perceptions, as I myself argued back in §2.3.2. However, in view of what has emerged in this section, it would be a mistake to cite as evidence for such a distinction the alleged fact that there are two quite different kinds of confusion, one proper to ideas and the other to perceptions. Equally, it would be a mistake to characterize the distinction between perceptions and ideas as a distinction between particular presentings and conceptual abilities, as Wilson does, on the ground that the sort of confusion applicable to perceptions has to do with certain (alleged) features of such presentings, whereas the sort of confusion applicable to ideas concerns levels of conceptual ability. Leibniz in fact has only one notion of confusion, equally applicable both to perceptions and ideas, and therefore his views about confusion cannot be used to drive a wedge between these two sorts of mental phenomena.

5.3.1 First Argument

The basic argument for the standard view was that the distinctness of concepts must differ from that of perceptions because Leibniz explicitly defines the former in terms of conceptual abilities, whereas the latter has nothing to do with such capacities. By now it should be quite clear how I would reply to this line of reasoning. Leibniz does define conceptual distinctness in terms of the ability to give a nominal definition, but this is itself only a nominal definition. Its job is not to indicate the *nature* of that distinctness, but to give the marks by which we can *recognize* distinct ideas. The mark of a distinct idea is the ability to define, but distinctness does not consist in this ability, or even in the property of being such as to underwrite this ability. Distinctness consists rather in the possession of explicit content, which in turn gives rise to the mark, that is, the ability to define.

5.3.2 Second Argument

This argument was based on the claim that conceptual distinctness, as understood by Leibniz, presupposes a rational faculty, which bare monads and the souls of animals lack. Given that every monad has perceptions distinct to some degree, and that non-rational souls have distinct perception insofar as they are capable of apperception, it follows that the sense of distinctness in view here cannot be the kind appropriate to concepts. Let me begin by noting that there is something right in this line of reasoning. Leibniz does sometimes use ‘distinct’ to mean ‘distinguished’, and his so doing is what suggests the thought that apperception presupposes distinct perception. To the extent that he speaks this way, it is quite true that there is a sense in which the distinctness of perceptions differs from that of concepts. However, this sense of perceptual distinctness, I have argued, appears in Leibniz’s writings only because of carelessness, in which case the question remains whether this argument gives us any reason to think that his considered conception of perceptual distinctness diverges from the sense in which concepts are distinct. Three considerations point to a negative answer. First, apperception does not presuppose perceptions that are distinct in the sense of having explicit content. So this sense of distinctness could still be the same as the sense that applies to concepts. Second, as we saw in Chapter 3, distinct perceptions themselves presuppose

reason. They are understandings in which we exercise reason. Thus even if the distinctness of concepts presupposes reason, we should not hesitate to say that this is the same kind of distinctness that applies to perceptions. Third and perhaps most important, it is wrong to say that conceptual distinctness presupposes reason. It is rather that the *mark* of this distinctness, the ability to define, requires reason. And since only minds can have concepts, there is no problem in saying that *conceptual* distinctness is always attended by a capacity exclusive to rational beings. But it does not follow from this that this sort of distinctness is always attended by the conceptual capacity. It is sufficient for Leibniz's purpose that this distinctness be accompanied by the capacity when it applies to concepts.

5.3.3 Third Argument

Brandom's second (and stronger) argument was that perceptual distinctness must differ from conceptual distinctness because distinct perceptions differ from confused ones only quantitatively, whereas distinct concepts differ from confused ones qualitatively. Perceptions form a continuum ranging from maximally confused to maximally distinct. Concepts, however, do not form such a continuum: either we can define a thing, in which case its concept is distinct, or we cannot, in which case its concept is confused. The difference between distinct and confused concepts correlates with the distinction between intelligibility and sensibility, and there are no intermediate degrees between these. We must therefore recognize that the sense of distinctness applicable to concepts differs from that proper to perceptions.

Let me begin my reply to this important argument by noting that Leibniz has given us little reason to think that he views a subject's perceptions as falling along a continuum ranging from the maximally confused to the maximally distinct. To be sure, he thinks distinct and confused perceptions admit of degrees of distinctness. And presumably he would be willing to say that distinct perceptions are more distinct than confused ones, that confused perceptions are less distinct than distinct ones, and so forth. But these claims require only that distinct and confused perceptions vary along the same dimension, not that they form a continuum. Recall that on the view I have been urging, both distinct and confused perceptions can vary with respect to degree of distinctness, that is, degree of explicitness of

content, even though there is a definite discontinuity between the confused and the distinct. Confused perceptions always have infinitely many ingredients, and consequently no matter how many of these ingredients we creatures manage to distinguish within them, an infinity of ingredients will always remain undistinguished. Even the most distinct of our confused perceptions are far less distinct than even the most confused of our distinct perceptions.

But not only do we lack a reason for ascribing this continuum-of-representations view to Leibniz, we have good reasons for not ascribing it to him. First, we have reason to accept the view of distinct perception I have articulated, and for the reason just given, that view entails that confused perceptions are not continuous with distinct ones. Second, if the fact that the distinction between distinct and confused ideas corresponds to the distinction between intelligibility and sensibility, or equivalently between ideas of reason and ideas of sense, gives us reason to suppose that our *ideas* do not form a continuum ranging from the maximally confused to the maximally distinct, then we have precisely the same reason for thinking that our *perceptions* do not form such a continuum. For Leibniz explicitly links distinct perceptions with understanding and confused perceptions with sensing.¹⁵

It might seem odd for Leibniz to associate both distinct perceptions and distinct ideas with the act of understanding. But on the view I have been urging this is not odd at all. We understand a thing F just in case two conditions are satisfied: (i) we have a distinct idea of F , and (ii) this idea has been presented to the mind in a conscious fashion. But the presentation of an idea to the mind, on my view, is nothing other than a perception, and when the idea is distinct, I have argued, so is the perception. Thus, understanding F requires both a distinct idea and a distinct perception of F . In this way, understanding involves both distinct ideas and distinct perceptions, as Leibniz's remarks suggest. Similarly, sensation involves the presenting of a confused or sensory idea to the mind. But the presenting of such an idea is just a confused perception. Sensing therefore involves both confused ideas and perceptions.

It seems to me, then, that the question whether distinct and confused perceptions form a continuum can be answered decisively in the negative. We must sharply distinguish this

¹⁵He also thinks we are free to the extent that we perceive distinctly, and in bondage to the extent that our perceptions are confused. Yet our actions presumably do not form a continuum ranging from the least to the most free.

question, however, from the related and more difficult question whether they differ only quantitatively, since two things could be discontinuous and yet differ only by degree. In this case, unfortunately, we will have to settle for something less than a decisive conclusion, for it is unclear what Leibniz's settled view of the matter is, or even whether he has one. On the one hand, it is clear that he sometimes views the difference as being merely quantitative. He indicates in a letter to Arnauld that finite and infinite, and even God and creatures, differ only in degree: "created spirits differ from God only as more to less, or finite to infinite" (G II 125=L 346). This suggests that infinitely complex (confused) representations also differ only by degree from finitely complex (distinct) ones. The same conclusion appears to draw support from these passages as well:

... we have supposed that confused thoughts differ *toto genere* from distinct ones, whereas they are only less distinguished and less developed because of their multiplicity. (G IV 563 = NS 117)

... confused thoughts are in the end nothing else but a multitude of thoughts which are in themselves like distinct ones, but which are so small that each by itself does not capture our attention and is not distinguished from the rest. In fact we can say that there is a truly infinite number of them, all at the same time, contained in our sensations [*sentimens*]. This is what the big difference between confused and distinct thoughts really consists in—a difference exactly the same as that between natural machines and artificial ones, as was explained when the new system was published in the *Journal des savants*. (G IV 574-75 = NS 140)

This second passage was discussed in some detail in the previous chapter. The salient point is that distinct thoughts differ from confused ones as artificial machines differ from natural ones, that is, as the finitely complex differs from the infinitely complex. The suggestion, then, as with the previous text, is that the difference is merely quantitative.

On the other hand, Leibniz sometimes suggests just the opposite. In the article adverted to at the end of the long text just quoted, he chides modern philosophers for "not having sufficiently grand ideas of the majesty of nature" insofar as they "take the difference between nature's machines and ours to be only that between great and small" (NS 15). He goes on to explain: "it is only my system which shows the true and immense distance there is between the least productions and mechanisms of divine wisdom and the greatest masterpieces produced by the skill of a limited mind—a difference which is not merely one of degree, but

one of kind” (NS 15-16). Hence, if the difference between confused and distinct thoughts really is exactly the same as that between natural and artificial machines, then such thoughts must in fact differ qualitatively. He also claims in the *New Essays* that our considerations of existence, power, and unity, which are presumably distinct perceptions, are of a whole other nature than our confused perceptions of pleasure and pain (NE 129).

All things considered, I suspect Leibniz favored the thesis that distinct and confused thoughts differ only quantitatively. For present purposes, however, I need not insist on this point. All I need insist on is this: whatever Leibniz thought about the difference between distinct and confused perceptions, we have reason to think he would have taken the same view of the difference between distinct and confused *ideas*. In his argument, Brandom supposes the latter difference to be qualitative; hence if the former difference is also one of kind, as I am inclined to think, then the two cases do not differ in this regard, and the argument fails.¹⁶ If, however, the difference in perceptions is only one of degree, then nothing prevents us from saying that the difference in ideas is also only quantitative. Again, if understanding and sensing differ only by degree, then we can plausibly suppose that ideas of reason differ from those of sense in the same way.¹⁷

We have no particularly good reason, then, for thinking that ideas differ from perceptions with respect to the nature of the contrast between the distinct and confused, and consequently, we can dismiss the Third Argument for the standard view. There is, however, a complication which must be introduced in order to handle a related difficulty, and this is perhaps the best place to introduce it. The difficulty arises in connection with my claim that the presentings of confused concepts are confused perceptions. Leibniz’s view requires that there be degrees of distinctness among confused perceptions. For the perceptions of non-rational monads must be more or less distinct, yet all their perceptions are confused.

¹⁶One might object that with perceptions the difference must be merely quantitative given that distinct perceptions are said to be *more distinct* than confused ones. But if this is so, then we would have to say the same thing about the difference in ideas, since Leibniz repeatedly claims that our distinct ideas of number, shape, and other such qualities are more distinct than our confused ideas of sensible qualities (DM §12=AG 44; AG 187; L 343; G I 392, VI 577).

¹⁷One might object that the difference between these two “kinds” of ideas must be one of kind, since the ability to recognize a thing is qualitatively different from the ability to define it. But this would be to confuse conceptual distinctness and confusedness with their marks. The mark of a distinct idea surely differs in kind from the mark of a confused one, but this does not entail that the ideas of which they are marks must also differ in this way.

However, confused concepts do not admit of degrees of distinctness; they are all thoroughly confused. Distinct concepts can be more or less distinct insofar as the definitions they allow us to give can be better or worse. But confused concepts are those which do not allow us to give a definition at all. So they are all thoroughly confused. We can put the same point in terms of the explicitness of ingredients. What is characteristic of distinct concepts is that their ingredients are to some extent explicit, so that we are able to define their objects. But none of the ingredients of confused concepts are capable of being discerned, otherwise they would allow us to give some kind of definition. Since distinctness is a measure of the degree to which the ingredients of a thing can be discerned, it follows that confused perceptions are all thoroughly confused.

The key to solving this problem is Leibniz's view that we have no concepts of particular things, such as particular substances, or particular bodies and their qualities. We have concepts of things that are abstract and universal, but not of things that are concrete and particular. Our perceptions of particular things are always confused, and these can vary with respect to degree of distinctness. If I walk closer to some object, for example, my perception of it generally becomes better, that is, more distinct. But the content of this perception is not a concept, because I cannot have a concept of any particular thing. There are thus two basic kinds of things of which I can have perceptions: particulars and universals. My perceptions of particulars, which are infinitely complex, are always confused, but they can be more or less distinct, depending on how closely I am related to them. My perceptions of universals are either confused, when I perceive sensible qualities, or else distinct, when I perceive common sensibles or the objects of mathematics, metaphysics, and ethics. The former perceptions do not allow me to give any definitions and are therefore completely confused. But the latter are distinct, and distinct to varying degrees, depending on the quality of the definition they allow me to give. Thus, there are degrees of distinctness among my distinct perceptions and among some, but not all, of my confused perceptions.

5.3.4 Fourth Argument

I noted in the previous section that those commentators who identify concepts with conceptual abilities have an additional reason for favoring the standard view. From their perspective, it is natural to understand conceptual distinctness as the property of being the ability to give a nominal definition, and this property could not be had by anything that is not such an ability. But Leibniz clearly thinks perceptions are not conceptual abilities. Hence perceptions could not be distinct in the same way as concepts. Like the first argument, this one involves the mistake of construing Leibniz's comments about conceptual abilities as real definitions of clarity and distinctness. We achieve a better, more attractive understanding of Leibniz's position, I have argued, if we reject this construal. The present argument, however, purports to give us an especially good reason for taking the comments about conceptual capacities to be real definitions. It supposes that concepts are themselves just conceptual capacities, and if this is so, it seems hard to avoid the conclusion that conceptual distinctness is the property of being a certain kind of conceptual capacity, specifically, the ability to enumerate the marks of a thing. Notice, however, how tenuous is the evidence for this supposition. It can hardly be denied that Leibniz sometimes characterizes ideas as something like capacities. In the early essay "What is an Idea?" he maintains that an idea is a "power of thinking" or an "ability to think about a thing" (L 207-8 [13]). Much later, in the *New Essays*, he claims that ideas (and truths) are "like inclinations, dispositions, habitudes, or natural potentialities, and not like actions" (NE 52; cf. 86, 106). I suggested back in §2.3.2 that these passages may not represent Leibniz's considered judgment on the matter, but even if they do, notice that they do not provide clear support for the thesis that ideas are conceptual abilities. The problem is that Leibniz is rather inexplicit in these texts about exactly what kind of ability he is claiming ideas to be, beyond the fact that they are supposed to be abilities *to think*. If thinking is understood broadly to include such activities as classifying and defining, it could be, as McRae and Wilson claim, that Leibniz is thinking of *conceptual* capacities. On the other hand, it seem likely that he has something more basic in mind, specifically the simple ability to think of a thing. This is the ability we exercise when we think of a thing without necessarily defining it or even classifying it, as

when I think of a circle without thinking of its definition, or when I clearly imagine some color without thinking that it is a color. It is the sort of capacity suggested by Leibniz's remark that "we are said to have an idea of a thing even if we do not think of it, if only, on a given occasion, we can think of it" (L 207). If this is what Leibniz has in mind, then we have no reason to accept the version of the standard view that gives rise to the Fourth Argument, and therefore no reason to accept that argument.

I conclude that none of the arguments for the standard view succeeds. This, together with the fact that a strong case can be made for the alternative view I have proposed, makes that alternative highly preferable to the standard view.

5.4 LEIBNIZ'S "CONFUSION"

I now want to consider the charge, leveled by Wilson and, following her, Nicholas Jolley, that Leibniz's thinking about confused ideas is muddled and inconsistent. The problem, according to Wilson, is that Leibniz tends to vacillate between two conflicting perspectives on such ideas. Consider first the question whether the confusion in our ideas can be overcome. Sometimes he takes a rather pessimistic line on this issue, as for example when he writes in the *New Essays* that "the confusion that reigns in ideas can be exempt from blame, being an imperfection of our nature; for we cannot discern the causes, for example, of odors and tastes, nor the content of these qualities" (NE 256). Conceptual confusion is here characterized as an imperfection of our nature, which suggests that it cannot be overcome, that is, that our ideas of sensible qualities are ineluctably confused. In contrast, Leibniz sometimes adopts an optimistic outlook, suggesting that we can have distinct ideas of sensible qualities. He believes that "When Newton publishes his book on colors we will understand them more distinctly" (AG 287). Further, he commits himself to the possibility of acquiring distinct ideas of such qualities when he suggests, as he frequently does, that we can develop scientific accounts of them. Given that on his view "heat, color, etc., are merely subtle motions and figures" (L 102; cf. L 189), it follows that the former qualities can be explained in terms of the latter. Thus he holds that white is "nothing but an assemblage of a number of small

convex mirrors” (G IV 575–76; L 96–97) and in general that “colors arise solely from a change of figure and position in a surface.” “If we had space,” he goes on to say, “it would be easy to explain light, heat, and all qualities in the same way” (L 96–97). Elsewhere he speculates that heat might be “a vortex of very fine dust,” red “the rotation of certain small globes,” and sound something “produced in air as circles are in water when a stone is tossed in” (AG 186). He stops short of endorsing these particular identifications, but his reluctance appears to spring solely from doubts about the details of these accounts, and not about their general form: he clearly thinks that these are the right *sorts* of accounts to give of sensible qualities. But notice, the allegation goes, that possession of physical-theoretical accounts of this sort implies possession of a distinct idea. For an idea is distinct when it allows one to give a nominal definition of the thing, and physical-theoretical accounts of sensible qualities supply just such definitions. As Wilson explains,

... if we are allowed to suppose that a *red* object, for example, is just one that reflects light waves of such and such frequency in such and such circumstances, there is no obvious reason why we could not ascribe to ourselves a distinct notion of red, even on the supposition that our (sense) perceptions are all confused. We would be able to say, for instance, that red objects differ from all others in that they reflect wave-lengths in range $l_x - l_y$. (1977, 328)

Jolley echoes this sentiment:

... if we remember [Leibniz’s] definition of ‘distinct idea’, there is no reason in principle why we should not have a distinct idea of red, or, moreover, why such an idea should not be communicated to a blind person. Leibniz seems to deny that our color concepts could become distinct in this way, but he is surely not entitled to say that this is more than a contingent limitation relative to the current state of optics in his day. In time, as the science of optics advances, we will be able to provide a theoretical definition of red in terms of textures, wave-lengths, and the like; Leibniz himself toys with such a possibility when he suggests that red may be the ‘revolving of certain small globes’. (1984, 184)

From this perspective, a scientific account of a quality such as red would provide the materials for a nominal definition of red, and therefore would give us a distinct idea of that quality. Hence, Leibniz’s belief in the possibility of such accounts commits him to belief in the possibility of coming to have distinct ideas of these qualities. Yet until we have such accounts, our ideas of these qualities are all confused. Physical accounts of sensible qualities would therefore render our initially confused ideas of sensible qualities distinct, in which case that confusion would be quite eliminable.

A related inconsistency arises in connection with Leibniz's various remarks about what a man born blind could and could not know. If sensible qualities can be explained in terms of primary qualities, or qualities of more than one sense, as Leibniz supposes when in his optimistic mood, then it stands to reason that such explanations, once in our possession, could be communicated to a person who had never experienced light or colors, and that this person would thereby acquire ideas of those qualities. This is precisely the view Leibniz intimates when he writes: "I have no doubt that a man born blind could speak aptly about colors and make a speech in praise of light, without being acquainted with it, just from having learned about its effects and about the conditions in which it occurs" (NE 287). In such a case as this, the blind man evidently has ideas of colors and light, given that he is able to speak of these qualities intelligently, even though he is not "acquainted" with them through sense experience.¹⁸ Yet when Leibniz takes his pessimistic stance, he asserts, to the contrary, that a person cannot acquire an idea of a sensible quality except through experiencing it. Thus:

Imagine a land where men do not know the sun and fire and have blood which is cold, not warm; surely they cannot be made to understand what heat is merely by describing it, for even if someone were to explain to them the innermost secrets of nature and even interpret perfectly the cause of heat, they would still not recognize heat from this description if it were presented to them, for they could not know that this peculiar sensation which they perceived in their minds is excited by this particular motion, since we cannot notice distinctly what arises in our mind and what in our organs. But if someone kindles a fire near them, they would at length learn what heat is. (L 285)

To say that these men from a heatless land might understand the "innermost secrets of nature" and nevertheless not know what heat is is tantamount to saying that they could possess a perfect physical-theoretical account of heat without having an idea of heat; at most they would only understand the nature of the *cause* of heat. In the same way, Leibniz

¹⁸Descartes had written: "whenever I express something in words, and understand what I am saying, this very fact makes it certain that there is within me an idea of what is signified by the words in question" (CSM II 160). Leibniz strenuously denies this claim on the ground that the notion in question may involve a contradiction and "we certainly have no idea of impossible things." Thus we can perfectly well speak of the fastest motion and understand what we are saying, but we cannot have an idea of the fastest motion because this notion demonstrably involves a contradiction (AG 25-26; cf. DM §23; §25). Before we can say with confidence that we have an idea of something, then, that thing must be proved possible. In the present case, however, we know that colors and light are possible because they are actual. Hence it would appear that Leibniz would concede that the blind man who speaks intelligently of colors and light has some idea of these qualities.

adds, “a man born blind could learn the whole of optics yet not acquire any idea of light” (ibid). If it were possible, in Leibniz’s mind, for us to develop distinct ideas of sensible qualities, then nothing would prevent us from communicating those ideas to people who are unable to have sensory experiences of the qualities themselves. But in these passages, he firmly denies that any such ideas can be communicated under these circumstances. Hence, the allegation goes, these texts conflict with those in which he indicates that a blind man could come to have ideas of colors and light.

Wilson regards these two inconsistencies as by-products of an ambivalence about the nature of sensible qualities which she characterizes as “an unrationalized, pervasive feature of Leibniz’s thinking” (330). On her reading, he routinely and unconsciously alternates between the view that sensible qualities are to be identified with the objective properties of bodies that cause them, and the view that they are something more than their causes, sometimes even within a single context. When the former view is foremost in his mind, he is prone to think that we can give scientific accounts of sensible qualities and that the man born blind can acquire ideas of light and colors. This is his optimistic outlook. When, however, he has the latter position in view, he tends to reject the possibility of such scientific accounts and of the blind man coming to have ideas of light and of colors. This, of course, is the pessimistic stance. Furthermore, Wilson holds that Leibniz’s ambivalence about sensible qualities leads him to speak equivocally on whether the confusion in our ideas can be remedied. Specifically, it “tends to muddle his discussions of confused ideas, by conflating the confusedness proper to concepts (on Leibniz’s own account) with that proper to perceptions” (330). The idea here is roughly this. Leibniz holds that perceptual confusion is ineluctable. He says as much in the cog-wheel passage of the *New Essays*; speaking there of the confused sensory perception of the transparency, he remarks that “it is the latter’s nature to be confused and to remain so; for if the confusion ceased (e.g. if the motion slowed down enough for us to be able to observe the parts in succession) it would no longer be this same perception, i.e. it would no longer be this *fantôme* of transparency” (NE 403). And he can hold this view, it seems, coherently: it does not obviously conflict with any of his other views. However, given the nature of conceptual confusion as Leibniz understands it, he cannot, for reasons we have already encountered, coherently say that that sort of confusion is likewise ineluctable.

Nevertheless he does sometimes say just that. The reason, according to Wilson, is that he sometimes gets confused: he tends to lose sight of his own distinction between perceptual and conceptual confusion, and when he does, he mistakenly transposes the ineluctability of the former kind of confusion onto the latter. He makes precisely this mistake, she contends, in those passages in which he affirms that our ideas of sensible qualities are hopelessly confused. In this way, the alleged ambivalence about sensible qualities supposedly explains why both inconsistencies occur in Leibniz's thinking.

Wilson is not the only prominent Leibniz scholar who has leveled such charges. Following Wilson, Nicholas Jolley claims that "even a limited analysis suggests that Leibniz is ambivalent in his treatment of the possession of colour concepts" (1984, 184). He then proceeds to sketch the main points of her interpretation and concludes that her assessment of the ways in which Leibniz goes wrong and why is "largely convincing" (186). From my perspective, however, something has gone seriously wrong in this analysis. In the first place, I have argued at length that on Leibniz's view, perceptions and ideas are confused in the same sense. If this is right, then it cannot be that he gets himself into trouble because he sometimes loses sight of his own distinction between perceptual and conceptual confusion. Moreover, it seems to me that Leibniz is not inconsistent in any of the ways suggested by Wilson and Jolley. To the contrary, it appears that they misunderstand his theories of sensible qualities and confused ideas, and consequently see tensions, inconsistencies, and confusions where there are none. On the question of the nature of sensible qualities, a case can be made that Leibniz consistently views them as merely assemblages of primary qualities. I will not be making this case, however. I want to focus instead on the alleged inconsistencies in his theory of confused ideas. I will argue that Leibniz consistently and coherently holds the following two doctrines: (1) The confusion in our ideas is just as ineluctable as that in our perceptions, despite the fact that we are capable of developing scientific accounts of sensible qualities; (2) There is a sense in which the blind man can come to have ideas of color and light, and another in which he cannot. The first thesis entails that an apparent contradiction in Leibniz's thinking is only apparent. The second reveals that his remarks about what a blind man can and cannot know seem to involve equivocations because of a failure to recognize an important but usually only implicit distinction operating in the background of Leibniz's thought.

Together, these two theses fully vindicate his theory of confused ideas from the objections lodged by Wilson and Jolley. In doing so, they also undermine Wilson's case for the alleged ambivalence about sensible qualities. For that case consists not of any independent evidence for the ambivalence, but only in the need to posit it in order to explain the inconsistencies; and once the inconsistencies disappear, no reason remains for ascribing the ambivalence to Leibniz.

5.5 THE REDUNDANCY OF IDEAS

At the root of Wilson and Jolley's misunderstandings is the assumption that on Leibniz's view we have only one idea for each sensible quality. This in turn leads them to reason that if an idea of a sensible quality is originally confused and this confusion is ineluctable, one cannot come to have a distinct idea of that quality. The assumption is not one Leibniz accepts, however. His position is rather that for any given sensible quality, there are at least two ideas and two concepts, one confused, the other(s) distinct.¹⁹ The confused (or sensory) idea, which Leibniz frequently characterizes as an image or phantasm,²⁰ comes to us, if at all, directly through the senses. The distinct (or intellectual) ideas, by contrast, come through reason and experimentation, and arise from our knowledge of the physical circumstances that underlie and accompany the corresponding confused idea. As Leibniz explains, our ideas of sensible qualities

are accompanied by circumstances that have a connection to them, although this connection is not one we understand, and these circumstances furnish something explicable and susceptible to analysis, which also gives some hope that one day we may find the reasons for these phenomena. Thus it happens that there is a kind of redundancy [*pleonasmie*] in the perceptions we have of sensible qualities as well as of sensible masses; and this redundancy [*pleonasmie*] is that we have more than one notion of the same subject. (NE 299=G V 278)

¹⁹An adumbration of this thesis can be found in Descartes's Third Meditation, in the context of his taxonomy of ideas, where he claims to find within himself two ideas of the sun, one evidently derived from an external source through the senses, the other from certain innate notions through astronomical reasoning (CSM 2:27).

²⁰See, e.g., NE 403-4, 487.

The first thing to note about this passage is that the “accompanying circumstances” to which Leibniz alludes are evidently nothing other than the minute shapes and motions that constitute the corporeal foundation of the quality. This suspicion is confirmed by other texts in which he is more explicit about the nature of these attending circumstances. In an unpublished essay on physics, for example, he remarks that

The secret of analysis in physics consists in this one device: the reduction of the confused qualities of the senses (namely: heat and cold in the case of touch, flavors in the case of taste, odors in the case of smell, sounds in the case of hearing, and colors in the case of sight) to the distinct qualities that accompany them, namely number, size, shape, motion, and cohesion, of which the last two are proper to physics. (P 20 [10])

In this text (and others like it²¹) sensible qualities are said to be accompanied by certain distinct qualities, which Leibniz identifies as the well-known primary qualities. It stands to reason, then, that when he talks about the circumstances that accompany our *ideas* of sensible qualities, he has in mind these same primary qualities. In other passages he speaks of our confused concepts of sensible qualities as being accompanied also by distinct *concepts* of primary qualities.²² Thus: “we can say much to a blind man about extension, intensity, shape and other varieties which accompany colors; but besides these accompanying distinct concepts there is something confused in color which a blind man cannot conceive by the assistance of any words of ours” (LP 51). As this passage makes clear, Leibniz believes there is both a confused concept (idea) of color, which comes only through the senses and therefore cannot be possessed by the man born blind, and multiple distinct concepts (ideas) which the blind man can acquire apart from any direct experience of the sensible quality itself.

We are now in a position to understand what Leibniz means when he says that there is a redundancy in our perceptions of sensible qualities which consists in the fact that “we

²¹Cf., e.g., this remark from an essay *On the Elements of Natural Science*: “When we consider the subject of any confused attribute, for example, of light, its cause or the way in which it is produced or increased, or its contrary or the way it is destroyed or diminished, and finally, its effects, we do this by bringing it together with an aggregate of many other confused or distinct attributes taken together. But distinct attributes, namely duration, magnitude, motion, figure, angle, and other circumstances, are to be preferred to the rest” (L 287). (Note that Loemker renders the last sentence of this passage: “But distinct attributes are to be preferred to the rest, namely duration, magnitude, motion, figure, angle, and other circumstances” (L 287). This is an accurate translation of a misleading remark: Leibniz surely intends the attributes he lists here as examples of distinct attributes, and not of “the rest.” I have hence modified the translation to reconcile it with this fact.)

²²Cf. NE 487: “So what holds us back is primarily the inadequacy of our knowledge of these distinct ideas concealed within the confused ones.”

have more than one notion of the same subject.” For he holds that with each such quality we can have both a confused sensory idea and one or more distinct ideas, intellectual rather than sensory.²³ We may find it helpful to think of the former idea as, properly speaking, an idea of the sensible quality itself, and the latter as ideas not of the quality itself but its accompanying circumstances. However, we must also bear in mind that on Leibniz’s view sensible qualities are really nothing more than their attending circumstances. We have seen, for example, that white is attended by an assemblage of small convex mirrors, but that on Leibniz’s view white is nothing more than such an assemblage. So given that a sensible quality is really just its “underlying” conditions, both our confused, sensory idea of the quality and our distinct, intellectual ideas of those conditions will be ideas *of the same subject*, differing not with respect to *what* they represent but *how* they represent it, the one confusedly, the other distinctly. That is why Leibniz can say that “when we perceive colors or smells, we certainly have no perception other than that of shapes and of motions” (AG 27; cf. NE 131-32; 403-04), for qualities of the former sort really are just qualities of the latter sort.

Leibniz’s language sometimes suggests that he wants to *distinguish* sensible qualities from the complexes of primary qualities to which they are reduced in physics. For example, that seems to be the point of referring to those complexes as the accompanying circumstances of the sensible qualities, the circumstances being something distinct from the qualities they accompany. Further, he calls proper sensibles “confused qualities” or “confused attributes” in order to distinguish them from the “distinct qualities” or “distinct attributes” that accompany them (P 20 [10]; L 287-88), and in one context he speaks of “the appearance that we call yellowness” which “arises out of that in which we have shown yellowness to consist objectively” (P 20 [10]). Such language can certainly seem to suggest that Leibniz means to distinguish sharply between sensible qualities and their conditions. But we can resist the suggestion by understanding him in the following way. Suppose that when Leibniz speaks of

²³Concerning the distinction between sensory and intellectual ideas, Leibniz writes: “Intellectual ideas, from which necessary truths arise, do not come from the senses; . . . the ideas that come from the senses are confused; and so too, at least in part, are the truths which depend on them; whereas intellectual ideas, and the truths depending on them, are distinct, and neither originate in the senses; though it is true that without the senses we would never think of them” (NE 81). “Intellectual ideas, or ideas of reflection,” he later adds, “are drawn from our mind” (NE 86; cf. NE 51).

a sensible quality in contradistinction to its attending circumstances, he is actually speaking of those circumstances, but *only insofar as they are confusedly perceived*. In that case, there would be a distinction between the conditions and the quality, though not a distinction in the order of *things*. There would be only one thing in view—the circumstance(s)—but understood in two ways, either as it is in itself, or as it appears to us. A distinct idea of white, for instance, would represent the assemblage of small convex mirrors as it actually is, whereas a confused idea of that quality would represent the same assemblage, but only as it appears. Both ideas would be ideas of the same thing, yet we could still recognize at least a verbal distinction between the quality and its foundation.²⁴ This, I submit, explains Leibniz’s tendency to speak of sensible qualities as if they were something more than their attending circumstances, while nevertheless identifying them.

Now that we have Leibniz’s redundancy thesis at least somewhat clearly in view, we can see how he would respond to the charge that his belief in the ineluctability of the confusion in our ideas leads to inconsistency. For on his view the essential confusedness of our (sensory) ideas of sensible qualities does not negate the possibility of also coming to have distinct ideas of those same qualities. It is true both that my (sensory) ideas of sensible qualities are ineluctably confused, and that I can come to have distinct ideas of those qualities by learning something about the conditions under which they occur. Thus when Leibniz says that Newton’s work will give us a more distinct understanding of colors, he should be understood to be talking about our understanding of the accompanying circumstances of the colors. Similarly, when he suggests that a man born blind can have an idea of color, he has in mind a distinct intellectual idea of the accompanying circumstances of that quality, as we can see from the fact that the blind man comes to have this idea by learning about color’s “effects and about the conditions in which it occurs” (NE 287). But when he says that this same man could learn the whole of optics and still have no idea of light (L 285), he has in mind the confused sensory idea. This idea can only be acquired by directly experiencing light, something the blind man cannot do. Leibniz is thinking along similar lines when he remarks that the blind man “could even understand the doctrine of optics, insofar as it depends on distinct and mathematical ideas, although he would not be able to attain to a conception

²⁴Cf. the “one-world” interpretation of Kant.

of the *clear-confused*, that is to say, of the image of light and of colors” (NE 137). Thus we do find a kind of unclarity in Leibniz’s language inasmuch as he is often inexplicit about whether he has in mind the confused sensory idea or the distinct intellectual idea of the sensible quality; but as long as we are sensitive to this unclarity, we can easily make good sense of all his pronouncements on this subject.

It might be thought that Leibniz’s view here is incoherent. For if I had a distinct idea of a sensible quality because I knew something about its accompanying circumstances, could I not then state marks sufficient for recognizing and distinguishing not only those circumstances, but that confused quality itself? Specifically, would not those circumstances themselves (the thing in itself) constitute a distinguishing mark of the quality they regularly accompany (the thing as it appears)? If so, then I would have a distinct idea not only of the quality’s physical basis, but of the quality itself. The latter idea would not, therefore, be ineluctably confused, and it would be wrong of Leibniz to insist that the confusion in our ideas of sensible qualities cannot be overcome or that people who have not experienced these qualities first-hand cannot (in some sense) have an idea of them.²⁵

The error in this objection is the thought that my distinct idea of a quality must provide me with distinguishing marks of the quality as it appears to me. To the contrary, on Leibniz’s view the only identifying criteria this idea provides are marks of the underlying conditions, the quality as it is in itself. For in order for these criteria to be marks of the quality as it appears, it would have to be possible to discern the ideas of these criteria in my sensory idea of the quality, and this cannot be done because that idea is essentially confused. As Leibniz explains,

if we had arrived at the inner constitutions of certain bodies, these [sensible] qualities would be traced back to their intelligible causes and we should see under what circumstances they were bound to be present; even though it would never be in our power to recognize their causes sensorily, in our sensory ideas which are the confused effects of bodies acting on us. For instance, we now have a complete analysis of green into blue and yellow, and almost all our remaining questions about it concern these ingredients; yet we are quite unable to discern the ideas of blue and yellow within our sensory idea of green, simply because it is a confused idea. (NE 403)

²⁵Both [Wilson \(1977, 328\)](#) and [Jolley \(1984, 184\)](#) object to Leibniz’s view along these lines.

On Leibniz's view, it is because we cannot distinguish the ideas of blue and yellow in our sensory idea of green that these colors do not constitute marks of green and that we cannot define green nominally even though we can give a real or causal definition of that quality as that which results from a thorough mixture of yellow and blue (NE 297). This example illustrates the general point that knowledge of the causes and underlying circumstances of a sensible quality does not suffice for possession of marks sufficient for recognizing that quality and distinguishing it from others. For in order for these causes and circumstances to count as marks of the quality, we would have to be able sensorily to detect those requisites in our perceptions of that quality, which we cannot do because these perceptions are necessarily confused. The point can be put this way. Suppose that a man blind from birth learns that redness occurs when an object under normal lighting has, say, a certain surface spectral reflectance. He thereby comes to have a distinct idea of red, specifically, of red as it is in itself. Does this idea now put him in a position to recognize redness when he encounters it, and to distinguish it from other qualities? According to Leibniz, it does not; the blind man's distinct idea allows him to recognize and distinguish the underlying condition of redness, and from this he could infer that redness (the thing as it appears) is present when he detects that these conditions have obtained. But he does not really recognize this redness, or distinguish it from other qualities, in the way that someone acquainted with that color can do. Indeed, though he could perhaps infer the presence of some thing called redness, he would have no idea what it is the presence of which he is inferring. Similarly, the mere fact that we can reduce (in Leibniz's sense of the term) confused sensible qualities to primary qualities, of which we have distinct ideas, does not entail that we can have distinct ideas of those confused qualities. For we reduce these sensible qualities by discovering the distinct qualities that attend them, and for the reasons just given, our knowledge of these attendant qualities does not allow us to give nominal definitions of the confused qualities they attend. Even if I know, for example, that red is always (or normally) accompanied by a certain surface spectral reflectance, I am no closer to being able to state any distinguishing marks of that quality. Suitable marks would need to be properties that I could see in red and that would therefore allow me to recognize red and distinguish it from other qualities. But the surface spectral reflectance that gives rise to red is decidedly not this kind of mark.

A similar observation allows us to remove a related difficulty also raised by [Wilson \(1977, 330\)](#) and [Jolley \(1984, 184-85\)](#). Leibniz holds that the man born blind can in some sense have a distinct, and therefore clear, idea of color. (For Leibniz, as for Descartes, only a clear idea can be distinct.) But anyone who has a clear idea of color must be able to recognize colors and distinguish them from other qualities. Yet the blind man can have no such ability, short of being granted sight. On Leibnizian principles, then, he must lack a clear, and therefore distinct, idea of color. Accordingly, Leibniz cannot consistently hold that the blind man has a distinct idea of color. This problem can be solved by appealing once again to the redundancy of ideas. Speaking more exactly, the blind man can have a distinct idea only of the underlying conditions of colors, of the colors as they are in themselves, and not as they appear to us. The recognitional ability with which this distinct (and therefore clear) idea endows him is strictly speaking an ability to recognize those conditions and to distinguish them from other things. And this is a recognitional ability the blind man can indeed have, given that these conditions or causes are nothing other than certain primary qualities, that is, qualities of more than one sense. But the fact that the blind man has a clear idea of color as it is does not entail that he can recognize that color as it appears and distinguish it from other qualities. Again, he could perhaps infer the presence or absence of the latter based on the presence or absence of the former, but that would not amount to the kind of direct recognition Leibniz has in mind when he characterizes the nature of clear ideas, for the blind man would not know what appearance or quality-as-it-appears the presence or absence of which he is inferring.

In view of the foregoing, it seems that Leibniz's views about confused ideas are not inconsistent in any of the ways suggested by Wilson and Jolley. First, he does not get confused about confusion, losing sight of his own distinction between perceptual and conceptual confusion, for he has no such distinction. Second, he coherently maintains that our (sensory) ideas of sensible qualities are just as ineluctably confused as our sensory perceptions of those qualities, and that we can come to have distinct ideas of these qualities through the development of physical-theoretical accounts. These theses are compatible because we do not acquire the distinct ideas by somehow disentangling the confusion in our sensory ideas, thereby making them distinct. Rather, we come to have the distinct idea over and

above the confused one, which by its nature must remain confused. Third, the apparent inconsistency in Leibniz's discussions of the man born blind disappears when we realize that such a person can have ideas of color and light in the sense of distinct, intellectual ideas, but cannot have confused, sensory ideas of those qualities. Finally, it should be mentioned that in resolving these alleged inconsistencies, I have completely undercut Wilson's argument for the ambivalence about sensible qualities. This ambivalence was postulated in order to explain the inconsistencies, but with the explananda emerging as illusions, we can dispense with the postulate.

5.6 CONCLUSION

In this chapter I have been arguing that the explicit content account provides not only the sense in which perceptions can be distinct, but the sense in which ideas and concepts can be distinct too, thus setting myself against the predominant view that the latter are not distinct in the same way as the former. I would like to conclude the chapter, and the dissertation, by integrating this position with those defended in previous chapters. Here, in outline, is the picture of the Leibnizian mind that results.

The fundamental representational contents of a mind are its ideas, concepts, and propositions. These contents are confused when and in the sense that they have ingredients most of which cannot be discerned within them; otherwise they are distinct. Distinct ideas, unless they are primitive, have explicit ingredients and consequently allow us to define their objects nominally, since such definitions are only enumerations of the marks provided by the ingredients. That is how we can know when we have such an idea. Ideas that are confused, in contrast, have only implicit ingredients, and thus do not allow us to define their objects. These mental contents are present in the mind whether we are thinking them or not. At any given time, though, some of them are being presented *to* the mind, and such presentings are what Leibniz calls perceptions. The presenting of a distinct idea is a distinct perception, that is, a perception in which the ingredients, if any, can be discerned by the perceiver. Since a perception is a presenting, its ingredients are also presentings, namely the "small" present-

ings (*petites perceptions*) of the ingredients of the idea presented in the larger perception. (When a complex idea is presented to the mind, that presenting will be complex too, for in presenting a whole, the parts must be presented as well.) When the idea is distinct, its ingredients will be explicit, and consequently the presentings of these ingredients—the ingredients of the perception—will be explicit too. So a perception is distinct in the same sense as, and only because, its (immediate internal) object is distinct. By the same token, when the idea presented is confused and therefore has only implicit ingredients, the presenting itself will be confused in the sense that its ingredients—the “small” presentings of the implicit ingredients of the idea—are implicit. They will be implicit because if the ingredients of the idea cannot be distinguished by the perceiver, then neither can the presentings of these ingredients, since we can only distinguish the ingredients if we can distinguish their presentings. That is why Leibniz can infer that our notions (concepts) of colors are confused from the fact that the composition of these colors “is not manifest in the sensation we have of them” (NS 105).

What holds of the mental contents just discussed, which are the immediate internal objects of *thoughts*, holds of the immediate internal objects of perceptions in general. Thus in all monads there are to be found things analogous to mental contents, which likewise admit of degrees of distinctness or explicitness of content. In any given monad, these contents together represent the entirety of the universe, but in each there is a unique distribution of degrees of distinctness over these contents, and therefore over the presentings of these contents, that is, the monad’s perceptions. Hence, each monad is distinguished from all the rest by its distinctness profile. In addition, every *body* has a unique distinctness profile, which corresponds exactly with that of the monad to which it belongs, but only imperfectly to that of any other. Consequently, a monad can be said to represent the distinctness profile of its own body more distinctly (i.e., in a more explicitly contentful way) than it represents that of any other body. The supposed union of soul and body comes to nothing more than this.

When an idea has explicit content, it goes some way toward making known the nature of what it represents; the presentings of such representations are understandings, and are to be contrasted with sensings, which are presentings of mental contents that because of their implicit content, acquaint us with the things they represent, but without allowing us to know

what they are or in what they consist. A proposition with explicit content, when true, is a truth of reasoning, which can be analyzed and can only be grasped through the understanding (i.e., perceived distinctly). A true proposition with implicit content, by contrast, is a truth of fact, something that cannot be analyzed and can only be known through the senses (i.e., perceived confusedly).

Freedom requires a distinct perception because we are free only to the extent that we act for a reason, something that requires grasping the necessary truth that constitutes the connection between the reason and the end for which it provides support. When we are in bondage, however, we act not for a reason but because we are swept along by some passion, which is a confused perception.

A substance is active with respect to some event when and in the sense that it provides us with the best explanation for that event's occurrence. It does so just in case it represents the reason for that event more distinctly than does any other substance. For to represent that reason more distinctly is to make the content of that reason more explicit and therefore better known. By contrast, when a substance represents the reason for some change it undergoes, and represents it less distinctly than does another, that means that the content of that reason is to be found more readily in the other monad, and thus that the former is passive with respect to that change.

This, in sum, is the picture of the Leibnizian mind for which I have argued. Its major advantages over its rivals can be summarized in three points. First, it enjoys superior textual support. Second, the theory is simpler and tidier than its competitors to the extent that it does all the necessary explanatory work with just one sense each of distinctness and confusion. The other theories that have been proposed are complex and messy by comparison, in that they require multiple senses of distinctness and confusion in order to do the same work—or rather less work. And that brings me to the final point: my theory is more comprehensive and enlightening than its rivals. It not only explains the connections between perceptual distinctness, understanding, and freedom—connections that its rivals do not even purport to explain—it also lays bare the content of the priority thesis, reveals why truths of reasoning must be grasped by the understanding and truths of fact through the senses, and finally provides a better account of the connection between distinctness and activity. In short, the

explicit content account surpasses its rivals in both quantity of things explained and quality of explanation. All told, it constitutes a significant advance over previous efforts.

APPENDIX

EXTRACTS FROM LEIBNIZ ON PERCEPTION AND REPRESENTATION

Letter to Jacob Thomasius, 1669

[1] The nature of body therefore evidently is constituted by extension and antitypy, since there is nothing in things without a cause, and nothing ought to be supposed in bodies whose cause cannot be discovered in their first or constitutive principles. But this cause cannot appear unless these principles are well defined. Therefore we can assume nothing in bodies which does not follow from the definition of extension and antitypy. But from these concepts are derived only magnitude, figure, situation, number, mobility, etc. . . . Hence it is clear that the explanation of all qualities and changes must be found in magnitude, figure, motion, etc., and that heat, color, etc., are merely subtle motions and figures. (L 101–02)

Fragment on Freedom, 1670s

[2] Freedom is a spontaneity combined with intelligence. (G VII 109)

[3] The more substances are determined by themselves and removed from indifference, the more they are perfect. For being always determined, either they will be determined by themselves and will be all the more powerful and perfect, or they will be determined from outside and then they will be obliged to serve in proportion to external things.

The more we act according to reason, the more we are free, and there is more servitude to the extent that we act more through passions. For the more we act according to reason, the more we act according to the perfections of our own nature, and to the extent that we

allow ourselves to be swept away by passions, we are slaves of external things that make us suffer. (G VII 110)

On Magnitude, 1676

[4] Those things are *homogeneous* with which there agrees in various ways some form or nature which is intelligible *per se*. For example: extension, mass, duration, motion, thought. It is evident from this that white and black are homogeneous, for they participate in some common nature, namely mass or corporeality. But color is not something which is intelligible *per se*, even though it is conceived *per se*; for it is not conceived distinctly. But these matters are too subtle to be explained here. (A VI, iii, N.64 = DSR 41)

On Forms, or, the Attributes of God, 1676

[5] The reason why those things in which there is some variety, such as color, are not perceived distinctly by us is that we perceive a color at some certain time; but this time can be subdivided into infinitely many parts, and in any part of this time we have done something that is relevant to the matter at issue, but we do not remember it because of a defect of our organs. (A VI, iii, N.72 = DSR 69)

[6] Sensible things cannot be understood perfectly by us, since infinitely many things concur in their constitution, because of the fact that time and place are divisible to infinity. Hence the perception of a sensible quality is not one perception, but an aggregate of infinitely many perceptions (A VI, iii, N.72 = DSR 71)

On the Plenitude of the World, 1676

[7] It seems to me that every mind is omniscient in a confused way; that any mind perceives simultaneously whatever happens in the entire world, and that these confused perceptions of infinite simultaneous varieties produce the sensations that we have of colors, tastes, and feels [*tactibusque*]. For such perceptions consist, not in one act of the intellect, but in an aggregate of infinitely many acts, especially when some period of time is needed for the sensation of some color or other perceptible thing. But time is infinitely divisible, and it is certain that at

any moment the soul perceives various things, but from all these infinitely many perceptions confused into one there arise the perceptions of sensible things. . . . Again, it is not surprising that any mind should perceive what is done in the entire world, since there is no body that is too small to sense all other things, given the plenitude of the world. (DSR 524 = LC 59–61)

Leibniz to Foucher, 1676

[8] I can prove likewise that extension, figure, and motion involve something imaginary and apparent, and although they are conceived more distinctly than color or heat, nevertheless when we push the analysis as far as I have, we find that these notions too have something confused, and that without supposing some substance that consists in some other thing, they will be as imaginary as sensible qualities, or as well-ordered dreams. For we cannot determine to which subject motion, considered in itself, belongs; and I demonstrate that there is no exact figure in bodies. (G I 392)

Dialogue, August 1677

[9] B. There is just this one thing that makes me pause. I notice that no truth is ever known, discovered, or proved by me except by the use of words and other signs presented to the mind.

A. In fact, if there were no characters, we could neither think of anything distinctly nor reason about it.

B. Yet when we examine the figures of geometry, we sometimes establish truths merely by contemplating them accurately.

A. True, but we must recognize that these figures must also be regarded as characters, for the circle described on paper is not a true circle and need not be; it is enough that we take it for a circle.

B. Nevertheless, it has a certain similarity to the circle, and this is surely not arbitrary.

A. Granted; therefore, figures are the most useful of characters. But what similarity do you think there is between ten and the character 10?

B. There is some relation or order in the characters which is also in things, especially if the characters are well invented.

A. That may be, but what similarity do the first elements themselves have with things; for example, 0 with nothing, or *a* with a line? You will have to admit, therefore, that in these elements at least, there is no need of similarity to things. This is true, for example, in the words *lux* and *ferens*; even though their compound *lucifer* has a relation to these two words, *light* and *bearing*, which corresponds to that which the thing signified by *lucifer* has to the things signified by *lux* and *ferens*.

B. But the Greek *phosphorus* has the same relation to *phos* and *phero*.

A. The Greeks might have used another word than this, however.

B. True. Yet I notice that, if characters can be used for ratiocination, there is in them a kind of complex mutual relation or order which fits the things; if not in the single words at least in their combination and inflection, although it is even better if found in the single words themselves. Though it varies, this order somehow corresponds in all languages. This fact gives me hope of escaping the difficulty. For although characters are arbitrary, their use and connection have something which is not arbitrary, namely a definite analogy between characters and things, and the relations which different characters expressing the same thing have to each other. This analogy or relation is the basis of truth. For the result is that whether we apply one set of characters or another, the products will be the same or equivalent or correspond analogously. But perhaps certain characters are always necessary for thinking.

A. Excellent! You have extricated yourself clearly and fully. And the analytic or arithmetical calculus confirms this view. For in numbers the problem always works out in the same

way whether you use the decimal system or as some mathematician did, the duodecimal. Afterward, if you apply the solution you have reached by calculation in several different ways, by arranging kernels or some other countable objects, the answer always comes out the same. In analysis as well, even though different properties of the subject are more easily apparent when different characters are used, the basis of truth is always found in the connection and coordination of these characters. . . .

You see then that however arbitrarily the characters may be chosen, if you observe a certain order and rule in their use, they always agree. Therefore though truths necessarily presuppose some characters, and are indeed sometimes asserted about these characters themselves (as in the theorem about casting off nines), yet they consist not in the arbitrary element in their characters but in the permanent element in them, namely, in their relation to things. It is always true, without any arbitrary choice of ours, that if certain characters are adopted whose relation to the things signified is known but different, the resulting relation of the new characters will again correspond to the relation of the first characters, as appears by a substitution or comparison. (L 183–85)

The Reduction of Confused Qualities to Distinct Ones, 1677?

[10] The secret of analysis in physics consists in this one device: the reduction of the confused qualities of the senses (namely: heat and cold in the case of touch, flavors in the case of taste, odors in the case of smell, sounds in the case of hearing, and colors in the case of sight) to the distinct qualities that accompany them, namely number, size, shape, motion, and cohesion, of which the last two are proper to physics. Therefore, if we discover that certain distinct qualities always accompany certain confused ones (e.g., that all color arises from the refraction of a ray, but not from its reflection), and that with the help of these distinct qualities we can explain precisely the entire nature of certain bodies, in such a way that we can demonstrate that it is of such and such a size, figure and motion—then it is necessary that these confused qualities also result from such a structure, though we cannot demonstrate the confused qualities in any other way from the distinct qualities. For there is no definition of confused qualities, and therefore demonstration does not apply in their case. It is enough, therefore, that by means of consistent inferences, which agree with experience,

we can explain all those things that can be thought distinctly and that accompany the confused qualities. For with the aid of certain qualities that are sufficient to determine the nature of bodies, we can discover their causes, and from these causes we can demonstrate their other effects, i.e. the rest of their qualities, and so in a roundabout way we discover what is real and distinct in confused qualities. For that remainder that cannot be explained (as, for example, the way in which the appearance that we call yellowness arises out of that in which we have shown yellowness to consist objectively) must be known to depend, not on the thing itself, but on the disposition of our organs and on the most minute structure of things. But it is enough for us to show what exists objectively in the bodies from which yellowness arises, and that is sufficient for the needs of life. Thus we shall have a means of producing confused qualities.

It is also useful for lessening labor if we reduce confused qualities to other simpler ones—e.g., if we reduce greenness to the compounding of yellow and blue. If we can show that certain flavors and odors go with certain colors, etc.; for we can reduce colors to distinct qualities more easily than we can reduce flavors. (A VI, iv, N.354; translated by G.H.R. Parkinson, P 20)

Leibniz to von Tschirnhaus, May 1678

[11] But for me the *art of combinations* is in fact something far different, namely, the science of forms or of similarity and dissimilarity, while algebra is the science of magnitude or of equality and inequality. The combinatory art seems little different, indeed, from the general science of characteristics, by the use of which fitting characters have been or can be devised for algebra, for music, and even for logic itself.

... [the art of combinations] can be and ought to be used not only when our concern is with formulas which express magnitudes, and with the solution of equations, but also when the involved key is to be developed for other formulas which have nothing in common with magnitude. The art of finding progressions and of establishing tables of formulas is also purely combinatorial, for these have a place not only in formulas expressing magnitude but in all others as well. For formulas can also be derived from them which express situation and the construction of lines and angles without considering magnitude. . . . Meanwhile I admit

that no more beautiful example of the art of combinations can be found anywhere than in algebra and that therefore he who masters algebra will the more easily establish the general art of combinations, because it is always easier to arrive at a general science *a posteriori* from particular instances than *a priori*. But there can be no doubt that the general art of combinations or characteristics contains much greater things than algebra has given, for by its use all our thoughts can be pictured and as it were, fixed, abridged, and ordered; *pictured* to others in teaching them, *fixed* for ourselves in order to remember them; *abridged* so that they may be reduced to a few; *ordered* so that all of them can be present in our thinking. . . . I believe that when you examine the matter more seriously, you will agree that this general characteristic will be of unbelievable value, since a spoken and written language can also be developed with its aid which can be learned in a few days and will be adequate to express everything that occurs in everyday practice, and of astonishing value in criticism and discovery, after the model of numeral characters. We certainly calculate much more easily with the characters of arithmetic than the Romans did either with pens or in their heads, and this is undoubtedly because the Arabic characters are more convenient, that is, because they better express the genesis of numbers. . . .

In fact, if the character expressing any concept is considered attentively, the simpler concepts into which it is resolvable will at once come to mind. Since the analysis of concepts thus corresponds exactly to the analysis of a character, we need merely to see the characters in order to have adequate notions brought to our mind freely and without effort. (L 193–94)

Letter to Herman Conring, 1678

[12] I recognize nothing in the world but bodies and minds, and nothing in minds but intellect and will, nor anything in bodies insofar as they are separated from mind but magnitude, figures, situation, and changes in these, either partial or total. Everything else is merely said, not understood; it is sounds without meaning. Nor can anything in the world be understood clearly unless it is reduced to these. Suppose that some angel wishes to explain the nature of color to me distinctly. He will accomplish nothing by chattering about forms and faculties. But if he shows that a certain rectilinear pressure is exerted at every sensible point and is propagated in a circuit through certain regular permeable or diaphanous bodies, and

then teaches me exactly the cause and the mode of this pressure, and deduces the laws of reflection and refraction from it, thus explaining everything in such a way that it is clear that it could not even happen otherwise, then at last he will have increased my knowledge, since he has treated physics mathematically. . . . You challenge me to reduce any genuinely sensible quality to common quantities. What else do mathematicians do when dealing with sight and hearing, where they reduce everything, as far as possible, to mechanical laws? There is still some doubt about odor and taste. Furthermore, what is more probable than that all sensible qualities are merely tactual qualities varying according to the variety of sense organs? But touch recognizes only magnitude, motion, situation, or figure and various degrees of resistance in bodies. (L 189)

What is an Idea?, 1678

[13] That is said to express a thing in which there are relations which correspond to the relations of the thing expressed. But there are various kinds of expression; for example, the model of a machine expresses the machine itself, the projective delineation on a plane expresses a solid, speech expresses thoughts and truths, characters express numbers, and an algebraic equation expresses a circle or some other figure. What is common to all these expressions is that we can pass from a consideration of the relations in the expression to a knowledge of the corresponding properties of the thing expressed. Hence it is clearly not necessary for that which expresses to be similar to the thing expressed, if only a certain analogy is maintained between the relations.

It is also clear that some expressions have a basis in nature, while others are arbitrary, at least in part, such as the expressions which consist of words or characters. Those which are founded in nature either require some similarity, such as that between a large and a small circle or that between a geographic region and a map of the region, or require some connection such as that between a circle and the ellipse which represents it optically, since any point whatever on the ellipse corresponds to some point on the circle according to a definite law. Indeed, a circle would be poorly represented by any other figure more similar to it in such a case. Similarly every entire effect represents the whole cause, for I can always pass from the knowledge of such an effect to a knowledge of its cause. So, too, the deeds

of each one represent his mind, and in a way the world itself represents God. It may also happen that the effects which arise from the same cause express each other mutually, as for example, gesture and speech. So deaf people understand speakers, not by sound, but by the motion of the mouth. (L 207–208)

Leibniz to Countess Elizabeth, 1678?

[14] I will say, in brief, that this characteristic would represent our thoughts truly and distinctly, and that when a thought is composed of other simpler ones, its character would also be similarly composed. (AG 239–40)

Introduction on the Value and Method of Natural Science, 1678-79?

[15] Every thing is to be held as more perfect to the degree that it is freer by nature; that is, to the degree that its power is greater over the things that surround it, and its suffering from external things is less. Hence, since the power proper to the mind is understanding, it follows that we will be the happier the clearer our comprehension of things and the more we act in accordance with our proper nature, namely, reason. Only to the extent that our reasons are right are we free, and exempt from the passions which are impressed upon us by surrounding bodies. Yet it is impossible to evade these passions entirely, since the mind is affected in various ways by its body, while our body, which is but a small part of the universe, can be helped and harmed by the bodies which surround it. (L 280 = A VI, iv, n. 366)

Of an Organum of Ars Magna of Thinking, c. 1679

[16] There are some things of which there are no nominal definitions. Thus, there are no nominal definitions of heat and light themselves, for if a man is ignorant of what is signified by the name of heat, he cannot be helped except either by exhibiting the thing under consideration, or by mentioning equivalent names in a language known to him, or by exciting his memory in some other way, if he felt heat at some earlier time. But no one doubts that there is some cause of heat, and if this were known perfectly, there would be a definition of heat. (MP 4)

**On Universal Synthesis and Analysis, or The Art of Discovery and Judgment,
1679(?)**

[17] The primary concepts from whose combination the rest are made are either distinct or confused. Those are distinct which are understood through themselves, such as ‘being’. Those are confused though clear, which are perceived through themselves, such as color, because we can only explain them to someone else by showing them to him. For though the nature of color is analyzable since it has a cause, we cannot sufficiently describe or recognize it by any concepts that are separately explained; it is known only confusedly and hence cannot be given a *nominal definition*. A nominal definition consists in the enumeration of signs or elements sufficient to distinguish the thing defined from everything else. If we proceed to seek the elements of the elements, we shall come at last to primitive concepts which have no elements at all, or none which we can explain to a sufficient degree. This is the art of dealing with distinct concepts. The art of dealing with confused concepts, however, must discover the distinct concepts which accompany the confused ones, whether these distinct concepts can be understood through themselves or can at least be resolved into such as are understood, for with their help we can sometimes arrive at some cause or resolution of the confused notion. (L 230)

[18] Furthermore, although names are arbitrary, once they are adopted, their consequences are necessary, and certain truths arise which are real even though they depend on the characters which have been imposed. For example, the rule of nines depends on the characters imposed by the decimal system, yet it contains real truth. (L 231)

Characteristica Geometrica, 10 August 1679

[19] (1) *Characters* are things by means of which the relations between other things are expressed, the treatment of which is easier than the treatment of those things. Thus, for each operation carried through on the level of characters, there is a corresponding proposition on the level of things; consequently, we can often postpone considering the things themselves until the end of the operation. Once that which is sought is discovered on the level of characters, it is easily found on the level of things, thanks to the initially established

accord between things and characters. Thus, just as machines can be exhibited by means of models, so solid bodies can be represented on a flat board, in such a way that there is no point of the body to which a corresponding one on the board cannot be assigned according to the laws of perspective. Therefore, if we performed (for representative purposes) a certain geometrical operation on the image of the thing on the flat board, that operation would yield a certain point on the board, and it would then be easy to determine a point of the thing corresponding to it. The solution of stereometrical problems will, then, be accomplished on the plane. (D 167 = GM V 141)

[20] (2) The more precision the characters have, that is, the more relations of the things they exhibit, the more useful they are. And when they exhibit all the relations of the things among themselves, in the way the arithmetical characters used by me do, then there is nothing in the thing that cannot be grasped through the characters. The algebraic characters are as useful as the arithmetical ones, because they denote indefinite numbers. And since there is nothing in Geometry which cannot be expressed by numbers, once a certain scale of the equal parts is established, it follows that any geometrical problem can also be subjected to a calculus. (D 167–68 = GM V 141)

Two Studies in the Logical Calculus, 1679

[21] The rule for discovering fitting characteristic numbers is this one only: when the concept of a given term is composed directly out of the concepts of two or more other terms, then the characteristic number of the given term is to be produced by multiplying the characteristic numbers of the terms composing it. (L 235)

[22] [This rule] suffices to include everything in the whole world in our calculus, insofar as we have distinct notions of it, that is, insofar as we know certain of its constituents and can distinguish them from all others after examining them by their parts; in other words, insofar as we can assign a definition to them. For these constituents are nothing but the terms whose concepts compose the concept which we have of the thing. (L 236)

[23] Every true categorical proposition, affirmative and universal, signifies nothing but a certain connection between the predicate and the subject—in the direct case, that is, of which I am always speaking here. This connection is such that the predicate is said to be in the subject, or to be contained in it, and this either absolutely or viewed in itself, or in some particular case. Or in the same way, the subject is said to contain the predicate; that is, the concept of the subject, either in itself or with some addition, involves the concept of the predicate. And therefore the subject and predicate are mutually related to each other either as whole and part, or as whole and coinciding whole, or as part to whole. In the first two cases the proposition is universal affirmative. . . . (L 236)

[24] Everything that we have so far said about terms that contain or do not contain each other in various ways, we may transfer to their characteristic numbers. This is easy because, as we said in Article 4, when a term helps to constitute another term, that is, when the concept of one term is contained in that of another, then the characteristic number of the one enters by multiplication into the characteristic number assumed for the term so constituted. Or what amounts to the same thing, the characteristic number of the term to be constituted (or that which contains the other) is divisible by the characteristic number of the constituting term (or that which is in the other). (L 238; cf. 240, §20)

[25] Although some propositions are to be assumed arbitrarily, such as definitions of terms, truths follow from them which are not arbitrary; for at least it is absolutely true that conclusions arise from such assumed definitions or what amounts to the same thing, that the connection between conclusions, whether theorems and definitions or arbitrary hypotheses, is absolutely true. This is apparent in numbers for instance, whose signs and decimal order are established by the will of man. Yet the calculations based on them signify absolute truths; that is, the connection between the assumed characters and the formulas deduced from them signify also the connections between things, which remain the same regardless of what characters are assumed. Moreover, it is useful to science to assume characters in this way, so that many conclusions may be drawn from few assumptions, which is the case when characters are assigned to the simplest elements of thought. (L 241 = LP 33–34)

Work toward a Universal Characteristic, ???

[26] To come back to the representations of ideas by characters: I think that controversies will never end nor silence be imposed upon the sects, unless complicated reasonings can be reduced to simple calculations, and words of vague and uncertain meaning to determinate characters. (Schrecker 14 = G VII ?)

[27] All human reasoning uses certain signs or characters. Neither the things themselves nor the ideas of the things can always be distinctly present to the mind, nor is this necessary. For the sake of abridgement, signs are therefore substituted for them. . . . As a consequence, names have been assigned to contracts, figures, and various other kinds of things, signs to numbers in arithmetic, to magnitudes in algebra. Thus, whatever has been discovered about those objects through experience or reasoning can also receive a sign, which can thereafter be firmly conjoined with the sign standing for the object. Under the term sign I comprehend words, letters; chemical, astronomical, and Chinese figures; hieroglyphs; musical, cryptographic, arithmetic, algebraic notions; and all other symbols which in our thoughts we use for the signified things. When the signs are written, drawn, or carved, they are called characters. They are the more useful, the more they express the concept of the signified thing, so that they can serve not only for representation, but also for reasoning. The signs used in chemistry and astronomy are of no avail in this respect, unless one hopes . . . to uncover in them I know not what mysteries. Nor do I believe that the figures of the Chinese and Egyptians can be of much value for the discovery of truths. The Adamitic language, and certainly its power, are definitely unknown to us, although some writers assert that they know it and can intuit the essences of things in the names given to them by Adam. The natural languages are of very great value in reasoning, but full of innumerable equivocations and unable to function in a calculus: for if they were able to do this, errors in reasoning could be uncovered from the very form and construction of the words, namely, as solecisms and barbarisms. Hitherto only the arithmetical and algebraic notations have offered this admirable advantage. For in these fields all reasoning consists in the use of characters, and a mental error and an error of calculation are identical.

Having pondered this matter more deeply, it became clear to me long ago that all human ideas [*cogitationes*] can be resolved into a few primitives. If characters were assigned to these primitives, characters for derivative notions could be formed therefrom, and from these it would always be possible to discover the primitive notions which are necessary ingredients; in short, it would be possible to find correct definitions and values and, hence, also the properties which are demonstrably implied in the definitions. (Schrecker 17–19 = G VII 204–5)

[28] Thus, relations [between signs] are to characters and formulas as propositions are to notions, or as the second act of the mind is to the first. (Schrecker 20 = G VII 206)

[29] Hence it appears that formulas (the characters themselves may be considered as the simplest formulas), relations, and operations are like notions, propositions, and syllogisms. (Schrecker 20 = G VII 206)

Fragment on Characters, n.d.

[30] I call the visible mark representing thoughts the character. The characteristic art is the art of forming and arranging characters . . . so that they have among themselves the relation that the thoughts have among themselves. The expression is the aggregate of characters representing the thing that is expressed. The law of expression is this: the expression of a thing is to be composed of the expressions of those things the ideas of which compose the ideas of the thing itself. (E. Bodemann, *Die Leibniz-Handschriften der Königlichen öffentlichen Bibliothek zu Hannover*. Olms-Hildesheim, 1966)

Notationes Generales, 1680s

[31] In the same way, I think that parhelia and other such things can be called ‘real phenomena’, as can beings through aggregation, like a pile of stones or an army, for a rainbow is an aggregate of drops which jointly produce certain colors that are apparent to us. Apparent qualities are those which are not in things absolutely, but only insofar as they act on us From this it follows that the rainbow is of diminished reality under two headings, for it is both a being through aggregation from drops, and the qualities by which it is known

are apparent or at least of that kind of real ones which are relative to our senses. (VE 188, quoted in D. Rutherford, “Phenomenalism and the Reality of Body in Leibniz’s Later Philosophy,” *Studia Leibnitiana* 22 (1990), 16)

Extracts from Bellarmine, 1680-82?

[32] Because it is rational appetite, will, on that account, is free, just as, on the other hand, because it is not rational, the appetite in beasts, on that account, is not free. Therefore, the cause of freedom is reason itself. (Gr 296; from Phemister, 27)

On the Elements of Natural Science, 1682-84?

[33] Thus we shall deal with body and with its qualities, both the intelligible ones which we conceive distinctly and the sensible ones which we perceive confusedly. (L 277)

[34] *Composite attributes are to be resolved into simple, and those which are simple with respect to the senses but not with respect to intellectual principles are to be reduced to their immediate cause. . . .* An attribute simple with respect to the senses, on the other hand, would be heat, for the senses do not show us by what mechanism the state of a body is produced which brings about the sensation of warmth in us, yet the mind properly perceives that warmth is not something absolute which is understood in itself but that it will only then be adequately understood when we explain of what it consists or distinctly describe its proximate cause—perhaps the expansion of air, or rather some particular motion of a fluid which is thinner than air. (L 285)

[35] *Confused attributes are sufficiently distinguished only by being shown. It follows clearly from this, moreover, that attributes which are sensible can be divided into confused and distinct by intellectual principles.* Confused attributes are those which are indeed composite in themselves or by intellectual principles but are simple to the senses and whose definition therefore cannot be explained. These attributes can be imparted not by description but only by pointing them out to the senses. Imagine a land where men do not know the sun and fire and have blood which is cold, not warm; surely they cannot be made to understand what

heat is merely by describing it, for even if someone were to explain to them the innermost secrets of nature and even interpret perfectly the cause of heat, they would still not recognize heat from this description if it were presented to them, for they could not know that this peculiar sensation which they perceived in their minds is excited by this particular motion, since we cannot notice distinctly what arises in our mind and what in our organs. But if someone kindles a fire near them, they would at length learn what heat is. Similarly a man born blind could learn the whole of optics yet not acquire any idea of light. (L 285)

[36] Thus a confused attribute can be related either to other confused attributes or to distinct attributes. The relating of an attribute to others, however, consists in making apparent their concurrence in the same subject, their connection with each other, their compatibility, and on the other hand, how one can be changed into another or can be produced out of several others. Thus there sometimes occurs another kind of resolution of confused attributes, which I call experimental to distinguish it from intellectual resolution. For example, the color green arises from a mixture of blue and yellow, no change taking place in the colored object but only in the eye. Furthermore, the separate ingredients can sometimes be distinguished with a microscope, each with its own color, yellow or blue. We cannot yet say with any certainty, however, that blue and yellow are prior to or simpler in nature than green, for we do not understand, but merely experience, that green arises out of yellow and blue. Therefore, neither could we have foreseen it. On the other hand, we understand though we may not experience that a square is made by two right isosceles triangles joined by a common hypotenuse and lying in the same plane or that from two odd numbers there arises an even number. For in intellectual resolution or in definition, one understands that which is described when the ingredients of the description are understood. But this is not the case in a resolution made by sense alone, and what is resolved in this way does not cease being confused. We do not grasp how the third color is given us through the confused appearance of these two colors.

When we consider the subject of any confused attribute, for example, of light, its cause or the way in which it is produced or increased, or its contrary or the way it is destroyed or diminished, and finally, its effects, we do this by bringing it together with an aggregate

of many other confused or distinct attributes taken together. But distinct attributes are to be preferred to the rest, namely duration, magnitude, motion, figure, angle, and other circumstances, for we can reason only to the extent that we consider distinct attributes. The application of mathematics to physical science consists in such consideration of the distinct attributes which accompany confused ones. Once we have learned that the angles of incidence and reflection of a ray of light are equal and that these angles are taken with respect to the perpendicular striking a plane tangent to the surface at the point of incidence, then we can easily establish the science of catoptrics. Similarly few experiments about refraction are needed to set up the foundations of dioptrics.

Since everything confused is by its nature resolvable into the distinct, even though it may not always be in our power to do this, it follows that all qualities and mutations of bodies can, according to their nature, at length be reduced to certain distinct concepts. . . . Thus material things can be explained through magnitude, figure, and motion. I know that some learned men disagree with this and consider qualities such as heat, light, elastic force, gravity, and magnetic force, as certain absolute entities emanating from substantial forms. . . . But the truth of the matter is that one must give the reason for such qualities and explain how they arise in a body [cf. L 90]. (L 287–88)

On the Method of Distinguishing Real from Imaginary Phenomena, c. 1684

[37] Concerning bodies I can demonstrate that not merely light, heat, color, and similar qualities are apparent but also motion, figure, and extension. And that if anything is real, it is solely the force of acting and suffering, and hence that the substance of a body consists in this (as if in matter and form). (L 365)

[38] Substances have primary matter [*materia prima*] or passive power insofar as they express something confusedly; active, insofar as they express it distinctly. (L 365)

Meditations on Knowledge, Truth and Ideas, 1684

[39] A notion which is not sufficient for recognizing the thing represented is *obscure*, as, for example, if whenever I remember some flower or animal I once saw, I cannot do so suf-

ficiently well for me to recognize that flower or animal when presented and to distinguish it from other nearby flowers or animals, or, for example, if I were to consider some term insufficiently explained in the schools, like Aristotle's entelechy, Therefore, knowledge is *clear* when I have the means for recognizing the thing represented. Clear knowledge, again, is either confused or distinct. It is confused when I cannot enumerate one by one the marks sufficient for differentiating a thing from others, even though the thing does indeed have such marks and requisites into which its notion can be resolved. And so we recognize colors, smells, tastes, and other particular objects of the senses clearly enough, and we distinguish them from one another, but only through the simple testimony of the senses, not by way of explicit marks. Thus we cannot explain what red is to a blind man, nor can we make such things clear to others except by leading them into the presence of the thing and making them see, smell, or taste the same thing we do, or, at very least, by reminding them of some past perception that is similar. This is so even though it is certain that the notions of these qualities are composite and can be resolved because, of course, they do have causes. Similarly, we see that painters and other artists correctly know what is done properly and what is done poorly, though they are often unable to explain their judgments and reply to questioning by saying that the things that displease them lack an unknown something. (AG 23–24).

[40] Furthermore, when we perceive colors or smells, we certainly have no perception other than that of shapes and of motions, though so very numerous and so very small that our mind cannot distinctly consider each individual one in this, its present state, and thus does not notice that its perception is composed of perceptions of minute shapes and motions alone, just as when we perceive the color green in a mixture of yellow and blue powder, we sense only yellow and blue finely mixed, even though we do not notice this, but rather fashion some new thing for ourselves. (AG 27)

Leibniz to Foucher, 1686

[41] But since all substances are continually produced by the sovereign Being, and express the same universe or the same phenomena, they correspond exactly. This makes us say that

one acts upon the other, because one expresses more distinctly than the other the cause or reason for its changes, much as we (with good reason) attribute movement to a ship rather than to the sea as a whole. (NS 52)

[42] As for the sixth supposition, it is not necessary that what we conceive of things outside of us should resemble those things perfectly, but that it express them, as an ellipse expresses a circle viewed askew, in such a way that each point of the circle corresponds to one of the ellipse and vice versa, according to a certain law of relation. For, as I have already said, each individual substance expresses the universe in its own way, rather like the way the same town is differently expressed according to different points of view. (G I 383–84 = NS 53)

General Inquiries about the Analysis of Concepts and of Truths, 1686

[43] Also primitive simple terms are all those confused phenomena of the senses, which we perceive clearly but cannot explain distinctly, or define by other concepts, or designate by words. Thus, we can say much to a blind man about extension, intensity, shape and the other varieties which accompany colors; but besides these accompanying distinct concepts there is something confused in color which a blind man cannot conceive by the assistance of any words of ours, unless it is granted to him to open his eyes at some time. In this sense, ‘white’, ‘red’, ‘yellow’ and ‘blue’, insofar as they consist of this inexplicable expression of our imagination, are a kind of primitive terms. But since they are confused and are of no assistance to our reasoning, it will be useful to avoid them as far as possible by using instead of definitions their accompanying distinct concepts, as far as these suffice to distinguish between confused concepts. Sometimes it will even be useful to mix both methods as convenience dictates, and so we can give their own marks to primary terms of such a kind, after explaining the rest through them. Thus, ‘colored’ is a term explicable through its relation to our eyes; but since that relation cannot be expressed accurately without many words, and the eye itself, as a kind of machine, again needs a lengthy explanation, it will be possible for ‘colored’ to be taken as a primitive simple term, by the addition to which of certain differentiating marks the various colors can be designated. Perhaps, however, ‘colored’ can be defined through the perception of a surface without sensible contact. (LP 51–52)

A Specimen of Discoveries About Marvelous Secrets of a General Nature, c. 1686

[44] Indeed, each substance expresses the whole universe according to its position and point of view, insofar as the others are related to it. Hence it is necessary that certain of our perceptions, although clear, are confused, since they involve an infinite number of things—e.g., color, heat, and the like. [Note added by Leibniz:] Further, multiple finite substances are simply different expressions of the same universe in accordance with different relations and the limitations proper to each. Just as one ground plan has infinite . . . [mss. defective]. (MP 77 = LC 309)

[45] For whatever happens to each one of them would flow from its nature and its notion even if the rest were supposed to be absent, for each one expresses the entire universe. However, that whose expression is the more distinct is judged to act, and that whose expression is the more confused is judged to be passive, since to act is a perfection and to be passive is an imperfection. Again, that thing is thought to be a cause from whose state a reason for changes is most easily given. Thus, one may suppose that a solid which is in motion in a fluid stirs up various waves, yet the same events can be understood if the solid is supposed to be at rest in the middle of the fluid and equivalent motions of the fluid are assumed; indeed, the same phenomena can be explained in an infinite number of ways. But though motion is something relative, the hypothesis which ascribes motion to the solid, and from this deduces the waves of the liquid, is infinitely more simple than the others, and so the solid is thought to be the cause of the motion. Causes are assumed, not from a real influx, but from the need to give a reason. (MP 79 = LC 311)

[46] If the perception is more distinct [*distinctior*], it makes a sensation. (G VII 317 = LC 321)

[47] It is also clear what perception should be if it is to be applicable to all forms, namely, the expression of many in one [*expressio multorum in uno*]. (LC 321)

Primary Truths, 1686?

[48] Indeed, all individual created substances are different expressions of the same universe and different expressions of the same universal cause, namely God. But the expressions vary in perfection, just as different representations or drawings of the same town from different points of view do. (AG 33)

Discourse on Metaphysics, 1686

[49] It can even be said that every substance bears in some way the character of God's infinite wisdom and omnipotence and imitates him as much as it is capable. For it expresses, however confusedly, everything that happens in the universe, whether past, present, or future—this has some resemblance to an infinite perception or knowledge. And since all other substances in turn express this substance and accommodate themselves to it, one can say that it extends its power over all the others, in imitation of the creator's omnipotence. (DM §9)

[50] It is even possible to demonstrate that the notions of size, shape, and motion are not as distinct as is imagined and that they contain something imaginary and relative to our perception, as do (though to a greater extent) color, heat, and other similar qualities, qualities about which one can doubt whether they are truly found in the nature of things outside ourselves. This is why qualities of this kind cannot constitute any substance (DM §12).

[51] The Action of One Finite Substance on Another Consists Only in the Increase of Degree of its Expression Together with the Diminution of the Expression of the Other, Insofar as God Requires Them to Accommodate Themselves to One Another. But without entering into a long discussion, in order to reconcile the language of metaphysics with practice, it is sufficient for now to remark that we ascribe to ourselves—and with reason—the phenomena that we express most perfectly and that we attribute to other substances the phenomena that each expresses best. Thus a substance, which is of infinite extension insofar as it expresses everything, becomes limited in proportion to its more or less perfect manner of expression.

This, then, is how one can conceive that substances impede or limit each other, and consequently one can say that, in this sense, they act upon one another and are required, so to speak, to accommodate themselves to one another. For it can happen that a change that increases the expression of one diminishes that of another. Now, the efficacy a particular substance has is to express well the glory of God, and it is by doing this that it is less limited. And whenever something exercises its efficacy or power, that is, when it acts, it improves and extends itself insofar as it acts. Therefore, when a change takes place by which several substances are affected (in fact every change affects all of them), I believe one may say that the substance which immediately passes to a greater degree of perfection or to a more perfect expression exercises its power and *acts*, and the substance which passes to a lesser degree shows its weakness and *is acted upon*. I also hold that every action of a substance which has perfection involves some *pleasure*, and every passion some *pain* and vice versa. (DM §15)

[52] God's Extraordinary Concourse is Included in that Which Our Essence Expresses, for this Expression Extends to Everything. But this Concourse Surpasses the Powers of Our Nature or of Our Distinct Expression, Which is Finite and Follows Certain Subordinate Maxims. . . . That is why, if we included in our nature everything that it expresses, nothing is supernatural to it, for our nature extends everywhere, since an effect always expresses its cause and God is the true cause of substances. But what our nature expresses more perfectly belongs to it in a particular way, since it is in this that its power consists. But since it is limited, as I have just explained, there are many things that surpass the powers of our nature and even surpass the powers of all limited natures. Thus, to speak more clearly, I say that God's miracles and extraordinary concourse have the peculiarity that they cannot be foreseen by the reasoning of any created mind, no matter how enlightened, because the distinct comprehension of the general order surpasses all of them. On the other hand, everything that we call natural depends on the less general maxims that creatures can understand. (DM §16)

[53] In order properly to conceive what an idea is, we must prevent an equivocation. For some take the idea to be the form or difference of our thoughts, and thus we have an idea in the mind only insofar as we think of it; every time we think of it anew, we have other ideas of

the same thing, though similar to the preceding ones. But it seems that others take the idea as an immediate object of thought or as some permanent form that remains when we are not contemplating it. And, in fact, our soul always has in it the quality of representing to itself any nature or form whatsoever, when the occasion to think of it presents itself. And I believe that this quality of our soul, insofar as it expresses some nature, form, or essence, is properly the idea of the thing, which is in us and which is always in us, whether we think of it or not. For our soul expresses God, the universe, and all essences, as well as all existences. . . . We have all these forms in our mind, and even at all times, since the mind always expresses all its future thoughts and already thinks confusedly about everything it will ever think about distinctly. And nothing can be taught to us for which we do not already have in our mind the idea that is like the matter of which that thought is formed. (DM §26)

[54] Thus, the expressions in our soul, whether we conceive them or not, can be called *ideas*, but those we conceive or form can be called *notions, concepts*. (DM §27)

[55] In my opinion, this arises from the fact that they have not yet considered sufficiently either what we have just explained about substances or the full extent and independence of our soul, which makes it contain everything that happens to it, and makes it express God and, with him, all possible and actual beings, just as an effect expresses its cause. (DM §29)

[56] Furthermore, by virtue of the decree which he has made that the will shall always strive toward the apparent good, by expressing or imitating God's will under certain particular conditions (with respect to which this apparent good always is to some extent a true good), God determines our will to choose what seems to be the best, but without constraining it. . . . It rests with the soul, therefore, to guard itself against surprises coming from appearances by means of a firm will, to reflect, and not to act or judge in certain circumstances until after careful and mature deliberation. It is nonetheless true and, indeed, even assured from all eternity that a certain soul will not make use of this power in such circumstances. (DM §30)

[57] We also see the explanation of that great mystery of the union of the soul and body, that is, how it happens that the passions and actions of the one are accompanied by the actions and passions or rather the appropriate phenomena of the other. . . . But here is the true reason: we have said that everything that happens to the soul and to each substance is a consequence of its notion, and therefore the idea itself or essence of the soul brings it about that all its appearances or perceptions must arise (spontaneously) from its own nature, and precisely in such a way that they correspond by themselves to what happens in the whole universe, but more particularly and more perfectly to what happens in the body that affects it, because the soul expresses the state of the universe in some way and for a time according to the relation of other bodies to its own. . . .

We also see that the perceptions of our senses, even when they are clear, must necessarily contain some confused sentiment, for as all the bodies of the universe are in sympathy, our body receives the impression of all the others, and even though our senses are related to everything, it is not possible for our soul to attend to everything in particular; that is why our confused sensations are the result of a truly infinite variety of perceptions. This is almost like the confused murmur that is heard by those who approach the seashore, which comes from the assemblage of repercussions of innumerable waves. Now, if from several perceptions (which do not come together to make one), there is none which stands out before the others and if they make impressions that are almost equally strong or equally capable of gaining the attention of the soul, the soul can only apperceive them confusedly. (DM §33)

[58] [Substances] also express the whole universe, although more imperfectly than minds do. (DM §34)

[59] The Excellence of Minds and that God Considers them Preferable to Other Creatures. That Minds Express God Rather than the World, but that the Other Substances Express the World Rather than God. . . . [D]istinct [*distincte*] knowledge is sometimes suspended during sleep and fainting spells For certainly minds are the most perfect beings and best express divinity. And since the whole nature, end, virtue, and function of substance is merely to express God and the universe, as has been sufficiently explained, there is no

reason to doubt that the substances which express the universe with the knowledge of what they are doing and which are capable of knowing great truths about God and the universe, express it incomparably better than do those natures, which are either brutish and incapable of knowing truths or completely destitute of sensation and knowledge. And the difference between intelligent substances and substances that have no intelligence at all is just as great as the difference between a mirror and someone who sees. (DM §35)

[60] In this way we may say that, although all substances express the whole universe, nevertheless the other substances express the world rather than God, while minds express God rather than the world. (DM §36)

Remarks upon Arnauld's Letter . . . , May 1686

[61] It is not enough that I sense myself to be a substance that thinks; I must distinctly conceive what distinguishes me from all other minds, and I have only a confused experience of this. The result is that, though it is easy to determine that the number of feet in the diameter is not included in the notion of sphere in general, it is not so easy to judge whether the trip I intend to make is included in my notion; otherwise, it would be as easy for us to be prophets as to be geometers. I am uncertain whether I will make the trip, but I am not uncertain that, whether I go or not, I will always be me. This is a presumption that must not be confused with a distinct notion or item of knowledge. These things appear undetermined to us only because the foreshadowings or marks which are in our substance are not recognizable to us. . . . It is the same here: when someone consults the confused experience he has of his individual notion in particular, he is far from apperceiving this interconnection of events; but when the general and distinct notions which enter into it are considered, it is discovered. (AG 75)

[62] [This interaction] occurs in accordance with the hypothesis of concomitance, which appears demonstrative to me. That is, each substance expresses the whole series of the universe according to the point of view or relation proper to it, from which it happens that they agree perfectly; and when we say that one acts upon another, we mean that the distinct [*distincte*]

expression of the one acted upon is diminished, and that of the one acting is augmented, in conformity with the series of thoughts involved in its notion. For although every substance expresses everything, in common usage we correctly attribute to it only the most evident [*distinguées*] expressions in accordance with its relation to us. (AG 76)

Leibniz to Arnauld, 14 July 1686

[63] Yet this independence does not prevent the intercourse of substances with each other, for since all created substances are a continual production of the same sovereign being, by the same designs, and expressing the same universe or the same phenomena, they correspond exactly with each other. This leads us to say that one acts upon the other, because one expresses more distinctly [*plus distinctement*] than does the other the cause or reason of their changes. This is very much like our ascribing motion to a ship rather than to the whole sea, and with good reason, even though, speaking abstractly, another hypothesis about motion could be set up, since motion in itself, abstracted from its cause, is always something relative. It is thus, I believe, that the intercourse between created substances must be understood and not as a real physical influence or dependence. (L 337)

Leibniz to Arnauld (draft), 28 November/8 December 1686

[64] This aside from the fact that this influence would be absolutely inexplicable. It is true that certain thoughts come to us when there are certain bodily movements and that certain bodily movements take place when we have certain thoughts, but this is because each substance expresses the whole universe in its fashion and this expression of the universe which brings about a movement in the body is perhaps a pain in regard to the soul. It is customary to attribute the action to that substance whose expression is more distinct and which is called the cause, just as when a body is swimming in water there are an infinity of movements of the particles of water in such a way that the place which the body leaves may always be filled up in the shortest way. This is why we say that this body is the cause of the motion, because by its means we can explain distinctly [*distinctement*] what happens. But if we examine the physics and the reality of the motion, it is quite as easy to suppose that the body is in repose and that all the rest is in motion conformably to this hypothesis, since

every movement in itself is only relative, that is to say, is a change of position which cannot be assigned to any one thing with mathematical precision; but the change is attributed to that body by means of which the whole is most clearly [*distinctement*] explained. In fact, if we take all phenomena, great or small, there is only one single hypothesis which serves to explain everything clearly [*distinctement*]. We can therefore say, that, although this body is not an efficient physical cause of these effects, its idea is at least, so to speak, the final cause, or, if you prefer, exemplar of them in the understanding of God; because, if we wish to ask what reality there is in motion we may imagine that God desires expressly to produce all the changes of position in the universe exactly the same as that ship was producing them while going through the water. Is it not true that it happens in exactly the same way, for it is not possible to assign any real difference? If we speak with metaphysical precision there is no more reason for saying that the ship presses upon the water in order to make that large number of circular movements because of which the water takes the place of the ship, than to say that the water itself exerts pressure to make all these circles and that it therefore causes the ship to move conformably. Unless we say, however, that God expressly desired to produce such a great number of movements so well fitted together, we do not give any real cause for it, and as it is not reasonable to have recourse to divine activity for explaining a particular detail, we have recourse to the ship, notwithstanding the fact that, in the last analysis, the agreement of all the phenomena of different substances comes about only because they are productions of the same cause, that is to say, God. Therefore each individual substance expresses the resolves which God made in regard to the whole universe. It is therefore for the same reason that we attribute pains to the movements of bodies, because thus we reach something distinct and this is enough for us to produce the phenomena or to prevent them. In order not to advance anything that is unnecessary, however, I say that we only think, and also that we produce only thoughts, and that the phenomena are only thoughts. As, however, all our thoughts are not effective and do not serve to produce for us others of a certain nature, and since it is impossible for us to work out the mystery of the universal connection between phenomena, we must pay attention by means of experience to those which have produced thoughts before, and this is the way the senses do and this is what is called external action, outside of us.

The hypothesis of concomitance or of the agreement of substances among themselves, follows from what I have said regarding each individual substance: that it involves, forever, all the accidents that will happen to it and that it expresses the whole universe in its manner. Thus whatever is expressed in the body by a movement or by a change of position, is perhaps expressed in the soul by a sense of pain. Since pains are only thoughts, we must not be surprised if they are the consequences of a substance whose nature it is to think. . . . it is the nature of the soul to express whatever happens in the body,

. . . Nevertheless, one has good reason to say that my will is the cause of this movement of my arm and that an interruption in the continuity of the matter of my body is the cause of the pain, for the one expresses distinctly what the other expresses more confusedly and the action should be attributed to the substance whose expression is most distinct. The same can be said practically where phenomena are produced. If it is not a physical cause, we can say that it is a final cause or better an exemplar cause, that is to say, that the idea in the understanding of God has contributed to God's resolve in regard to this particularity, when the determination regarding the universal sequence of things was being made. (CA 150–54 = G II 69ff.)

Leibniz to Count Ernst von Hessen-Rheinfels, November 1686

[65] Nevertheless, the present state of our life compels us to a great number of confused thoughts which do not add to our perfection; such is the knowledge of customs, of genealogies, of languages, and even of all historical knowledge of facts, whether civil or natural; these are useful for us in avoiding dangers and in taking care of the bodies and of the men whom we have around us, but they do not enlighten the mind. . . . Here are a few examples taken from the arts, which will enable us to distinguish between that which enlightens the mind and that which only leads it along as a blind man might be led. If a workman knows by experience or by hearsay that when the diameter is seven feet the circumference of the circle is a little less than twenty-two feet, or if a gunner knows by hearsay, or because he has frequently measured it, that bodies are thrown the farthest at an angle of 45 degrees, the knowledge is confused and is that of an artisan; it does very well for earning a living and for performing services to others, but the knowledge which enlightens the mind is that

which is distinct, or which gives the causes or reasons involved, as when Archimedes gave the demonstration for the first rule and Galileo for the second. In a word, it is only knowledge of the reasons in themselves or of the necessary eternal truths, above all of those which are the most comprehensive and which have the most relation to the sovereign being, that are able to make us more perfect. This knowledge alone is good in itself; all the rest is mercenary (CA 169–70)

Leibniz to Arnauld, 28 November/8 December 1686

[66] But (it will be asked), how does the soul know this ill disposition of the body? I reply that it is not by any impression or action of bodies on the soul, but because the nature of every substance carries a general expression of the whole universe and because the nature of the soul carries, more particularly, a more distinct expression of that which is now happening with regard to its body. That is why it is natural for the soul to mark and know the accidents of its body through accidents of its own. (AG 77–78)

Arnauld to Leibniz, 4 March 1687

[67] I do not understand very well what you mean by this “distincter expression which our soul bears of that which is now happening to its body,” and how it comes about that when someone pricks my finger my soul knows of this pricking before it feels the pain of it. This very “distincter expression,” etc., ought to let it know therefore an infinity of other things which happen in my body which, nevertheless, it does not know, for instance all that goes on in the process of digestion and of nutrition. (CA 172)

Leibniz to Arnauld, 30 April 1687

[68] I do not think there is any difficulty in my saying that the soul expresses more distinctly *caeteris paribus* that which belongs to its body, since it expresses the whole universe in a certain sense, in particular in accordance with the relation other bodies have to its own, since it cannot express all things equally well; otherwise there would be no differences among souls. But it does not follow from this that it must apperceive perfectly everything occurring in the parts of its body, since there are degrees of relation between these very parts, parts which

are not all expressed equally, any more than external things are. The greater distance of external bodies is compensated for by the smallness, or some other hindrance, with respect to the internal parts—Thales saw the stars, though he did not see the ditch at his feet.

For us the nerves and membranes are more sensitive than the other parts of our bodies, and perhaps it is only through them that we apperceive the others. This apparently happens because the motions of the nerves or of the fluids in them imitate the impressions better and confound them less, and the most distinct expressions in the soul correspond to the most distinct expressions of the body. This is not because the nerves act on the soul, or the other bodies on the nerves, metaphysically speaking, but because the former represent the state of the latter through a spontaneous relation. We must also take into account that too many things take place in our bodies for us to be able to apperceive them all individually. What we sense is only a certain resultant to which we are habituated, and we are not able to distinguish the things that enter into the resultant because of their multitude, just as when one hears the noise of the sea from afar, one does not discern what each wave does, even though each wave has an effect on our ears. But when a striking change happens in our body, we soon notice it and notice it more clearly than external changes which are not accompanied by a notable change in our organs.

I do not say that the soul knows the pricking before it has the sensation of pain, except insofar as it confusedly knows or expresses all things in accordance with my previously established principles. But this expression which the soul has of the future in advance, although obscure and confused, is the true cause of what will happen to it and of the clearer perception it will have afterwards, when the obscurity is lifted, since the future state is a result of the preceding one. (AG 81–82)

[69] By assuming mere extension we destroy all this marvelous variety, since mass by itself (if it is possible to conceive it), is as far beneath a substance which is perceptive and representative of the whole universe, according to its point of view and according to the impressions (or rather the relations) its body receives mediately or immediately from all others, as a cadaver is beneath an animal, or rather, it is as far beneath a substance as a machine is beneath a man. It is also because of this that the features of the future are formed in advance, and that

the features of the past are conserved forever in each thing, and that cause and effect give way to one another exactly up to the least detail of the least circumstance, even though every effect depends on an infinity of causes, and every cause has an infinity of effects; (AG 87)

[70] . . . death will only be a change consisting in diminution, which causes this animal to reenter the recesses of a world of minute creatures where it has more limited perceptions, until the order comes, perhaps calling them to return to the stage. (AG 88)

[71] But in the end, all these unities become realized only by thoughts and appearances, like colors and other phenomena, which, nevertheless, are called real. The tangibility of a heap of stones or a block of marble does not prove its substantial reality; and since nothing is so solid that it does not have some degree of fluidity, perhaps this block of marble is only a heap of an infinite number of living bodies, or like a lake full of fish, even though these animals cannot ordinarily be distinguished by the eye except in partially decayed bodies. We can therefore say of these composites and similar things what Democritus said so well of them, namely, they depend for their being on opinion or custom. And Plato held the same opinion about everything which is purely material. Our mind notices or conceives some true substances which have certain modes; these modes involve relations to other substances, so the mind takes the occasion to join them together in thought and to make one name account for all these things together. This is useful for reasoning, but we must not allow ourselves to be misled into making substances or true beings of them; this is suitable only for those who stop at appearances, or for those who make realities out of all abstractions of the mind, and who conceive number, time, place, motion, shape, [[and sensible qualities]] as so many separate beings. Instead I hold that philosophy cannot be better reestablished and reduced to something precise, than by recognizing only substances or complete beings endowed with a true unity, together with the different states that succeed one another; everything else is only a phenomena, abstractions, or relations. (AG 89)

Arnauld to Leibniz, 28 August 1687

[72] I have no clear idea what you mean by the word *express* when you say that “our soul

expresses more distinctly, other things being equal, that which pertains to its own body, since it expresses even all the universe in a certain sense.” For if by this *expression* you mean a certain thought or a certain knowledge, I cannot agree that my soul has more thought and knowledge regarding the movement of the lymph in the lymphatic ducts than regarding the movement of the satellites of Saturn; if what you call expression is neither thought nor knowledge, I do not know what it is. Therefore it cannot be of service in solving the difficulty which I raised; namely, how my soul can have a feeling of pain when I am pricked during my sleep; since for this I would have to know that someone were pricking me, while in fact it obtains this knowledge only by the pain which it feels. (CA 203)

Leibniz to Arnauld, 9 October 1687

[73] I have said that the soul, which naturally expresses the entire universe in a certain sense and according to the relationship which other bodies have to its own, and which as a consequence expresses more immediately the properties of the parts of its body, must therefore, by virtue of the laws of relationship which are essential to it, particularly express certain unusual motions of the parts of its body. This happens when it feels pain. To this you reply that you have no clear idea of what I mean by the word *express*. If I understand by it a thought, you do not agree that the soul has more thought and more knowledge of the motion of the lymph in the lymphatic ducts than it has of the satellites of Saturn. But if I mean something else (you say), you do not know what it is. Therefore (assuming that I cannot explain it distinctly) this term will in no way help us to understand how the soul can give itself a feeling of pain, since to do this it would already have to know (in your opinion) that I had been pricked, instead of which it arrives at this knowledge only through the pain which it felt.

In reply to this criticism, I shall explain the term which you judge to be obscure, and I shall apply it to the difficulty which you have raised. A thing expresses another (in my language) when there is a constant and ordered relationship between what can be said of the one and the other. It is in this way that a projection in perspective expresses a geometric figure. Expression is common to all the forms and is a genus of which natural perception, animal feeling, and intellectual knowledge are species. In natural perception and feeling

it suffices that what is divisible and material and is found dispersed among several beings should be expressed or represented in a single indivisible being or in a substance which is endowed with a true unity. The possibility of such a representation of several things in one cannot be doubted, since our soul provides us with an example of it. But in the rational soul this representation is accompanied by *conscience*, and it is then that it is called thought. Now this expression takes place everywhere, because every substance sympathizes with all the others and receives a proportional change corresponding to the slightest change which occurs in the whole world, although this change will be more or less noticeable as other bodies or their actions have more or less relationship with ours. With this I believe Descartes would himself have agreed, for he would undoubtedly grant that, because of the continuity and divisibility of all matter, the slightest movement exerts its effect upon nearby bodies, and so from body to body to infinity, but in diminishing proportion. So our body must be affected in some way by the changes of all the rest. Now to all the motions of our body their correspond certain perceptions or thoughts of our soul, more or less confused; thus the soul will also have some thought of all the motions of the universe, and in my opinion every other soul or substance will have some perception or expression of it. It is true that we do not apperceive all the motions of our body distinctly [*distinctement*], as for example, that of the lymph. But to make use of an example which I have already used, I must have some perception of the motion of each individual wave on the shore, in order to be able to apperceive what results from the whole, namely, the great noise which is heard near the sea. So we also sense some confused result of all the motions taking place within us, but being accustomed to this internal motion, we do not apperceive it distinctly [*distinctement*] and with reflection except when there is an important change, as in the beginning of illnesses. It would be desirable for physicians to work at the task of making a more exact distinction among the kinds of confused sensations which we have of our body. Now, since we apperceive other bodies only through the relation which they have to ours, I was right in saying that our soul expresses best what pertains to our own body. Also, we should not know the satellites of Saturn and Jupiter except as the result of a motion taking place in our eyes. . . .

But the states of the soul are naturally and essentially expressions of the corresponding states of the world and particularly of the bodies which belong to them. . . . So the soul must

apperceive [*s'apperçoive*] the prick, since the laws of correspondence require that it should express more distinctly [*plus distinctement*] any more noticeable change in the parts of its body. It is true that the soul does not always apperceive [*s'apperçoit*] the causes of the prick and of its future pain distinctly [*distinctement*], when these are still concealed in the representation of state *A*, as is the case when one is asleep or for some other reason does not see the pin approaching. But this is because the pin then makes too small an impression upon us, and although we are already affected in some way by all the motions and their representations in our soul, and so have within us the representation or expression of the same prick, that is, the cause of the pain, we cannot untangle them from so many other thoughts and motions until they become noticeably strong. Our soul reflects only on more unusual phenomena which are distinguished [*distinguent*] from the rest; it does not think distinctly [*distinctement*] of any when it thinks equally of all. (L 339–41)

[74] One can never assign a definite and precise surface to any body, as could be done if there were atoms. I can say the same thing about magnitude and motion, namely, that these qualities or predicates are of the nature of phenomena, like colors and sounds, and though they involve more distinct knowledge, they can no more sustain a final analysis. (L 343)

[75] And when I consider only distinct ideas, it seems to me conceivable that divisible phenomena or a plurality of beings can be expressed or represented in a single indivisible being; and this is sufficient for the concept of a perception, without the necessity of adding thought or reflection to this representation. (L 344)

Leibniz to Arnauld, 23 March 1690

[76] Each substance expresses the universe as a whole, but one does it more distinctly [*distinctement*] than another, each one pre-eminently with regard to certain things and according to its point of view. The union of the soul with the body, and even the operation of one substance on another, consists only in this perfect mutual accord. (L 360)

Notes on Descartes's Principles, 1690

[77] For I have elsewhere explained that we often think only confusedly of what we are talking about, and we are not conscious of the existence of an idea in our mind unless we understand the thing and analyze it sufficiently. (L 387)

[78] We will only what appears to the intellect. (L 387)

[79] The highest perfection of man consists not merely in that he acts freely but still more that he acts with reason. Better, these are both the same thing, for the less anyone's use of reason is disturbed by the impulsion of the affections, the freer one is. (L 388)

[80] To ask whether our will is endowed with freedom is the same as to ask whether our will is endowed with will. Free and voluntary signify the same thing. For freedom is the same as spontaneity with reason, and to will is to be brought to act through a reason perceived by the intellect. But the purer this reason is, and the less mixed up it is with the impact of base and confused perceptions, the freer is the act. (L 389)

[81] On Articles 65–68. Descartes, following the ancients, rendered a useful service in eradicating the prejudice that makes heat, colors, and other phenomena seem to be things outside of us, since it is evident that the same hand on which water seemed very hot soon finds it tepid; and a man who observes a green color in a powdered mixture no longer sees it as green when his eye is aided by an instrument but as a mixture of yellow and blue and can grasp the causes of these two colors with the use of better instruments and other observations or reasons. From these considerations it seems that no such thing exists outside of us, the phantasm of which appears to our imagination. We are commonly like boys who have been convinced that there is a pot of gold at the very end of the rainbow where it touches the earth and who run toward it in a vain effort to find it. [Meanwhile we are right in saying that colors and heat are in things, when we mean by this the foundations of these phenomena.]. (L 390–91)

Notes on Some Comments by Fardella, March 1690

[82] Hence, each thing is so connected to the whole universe, and one mode of each thing contains such order and consideration with respect to the individual modes of other things, that in any given thing, indeed in each and every mode of any given thing, God clearly and distinctly sees the universe as implied and inscribed. As a result, when I perceive one thing or one mode of a thing, I always perceive the whole universe confusedly; and the more perfectly I perceive one thing, the better I come to know many properties of other things from it. (AG 103)

Supplement to the Explanation of the New System Regarding the Soul and the Body, sent to Paris on the Occasion of a Book Titled *The Knowledge of the Self*, 1694?

[83] Our author maintains “that the mind is united to the body passively but not actively,” because, according to him, there is no part of the body which does not act on the mind, whereas there are parts of the body on which the mind does not act. But it seems rather that such action must always be reciprocal, and that there is never action between created things without reaction. He also maintains “that the body is united to the mind as a whole actively but not passively,” because, the mind being indivisible, the body can only affect it throughout; whereas, according to him, the mind has pure intellectual thoughts which do not affect the body. And yet it seems that the body reacts to our abstract thoughts also, and experience shows that meditation is capable of harming it; for in addition to the fact that attention tenses the fibers of the brain, even the most abstract thoughts always employ *signs* which affect the imagination. (NS 140)

[84] *Confused thoughts* are usually understood as being of an entirely different kind from *distinct* thoughts, and our author thinks that the mind is more united to the body by confused thoughts than by distinct ones. That is not unreasonable, for confused thoughts are a mark of our imperfection, passions, and dependence on the assemblage of exterior things or on matter, whereas the perfection, force, control, liberty, and action of the soul consist principally in our distinct thoughts. However, that does not mean it is not true that confused

thoughts are in the end nothing else but a multitude of thoughts which are in themselves like distinct ones, but which are so small that each by itself does not capture our attention and is not distinguished from the rest. In fact we can say that there is a truly infinite number of them, all at the same time, contained in our sensations [*sentimens*]. This is what the big difference between confused and distinct thoughts really consists in—a difference exactly the same as that between natural machines and artificial ones, as was explained when the new system was published in the *Journal des savants*. So it can be said that confused thoughts are “essentially different from each other” only in the same way as it can be said that bodies or motions are different from each other. It is true that our author seems to be of another opinion, believing that “the sensation [*sentiment*] of pain differs essentially from that of heat, although the difference between the motions of fire which cause pain and those which cause heat is only one of degree.” However, we can say that the pleasant sensation [*sentiment*] of moderate heat and the painful sensation [*sentiment*] of excessive heat are equally representative of the motions of matter, and differ only as they do, leaving aside the reflections of the soul. So we should certainly not understand confused sensations [*sensations*] as something basic and inexplicable, or otherwise we would be putting them on virtually the same footing as the old “qualities” of some scholastic philosophers. If we insist on maintaining that there is an essential difference, we will only be substituting these sensations [*sensations*] for those qualities, and so merely shifting the difficulty. And although it is true that it is beyond our powers to explain them completely, because the number of variations involved is much too great, that doesn’t prevent us from understanding them more and more by means of experiments which reveal their basis in distinct thoughts. Light and colors provide examples of this. These confused sensations [*sentimens*] are not at all “arbitrary,” either, and I don’t agree with the opinion accepted by many today, and followed by our author, that there is no resemblance or relation between our sensations [*sensations*] and corporeal traces. It seems rather that our sensations [*sentimens*] represent and express them perfectly. Perhaps someone will say that the sensation [*sentiment*] of heat has no resemblance to motion: yes, without doubt it does not resemble a sensible motion, like that of a carriage wheel; but it does resemble the assemblage of small motions in the fire and in the organs, which are its cause; or, rather, it is only their representation. It is like the way in

which whiteness bears no resemblance to a convex curved mirror, even though it is nothing but an assemblage of a number of small convex mirrors, such as on close inspection froth is seen to be. [Cf. L 96] If we could always discover the cause of our sensations [*sensations*] with the same facility, we would find that it is always something similar. So all the jibes and ranting against the schools and against the ordinary philosophy, according to which our sensations [*sensations*] bear a resemblance to the traces of objects, are useless, and arise only from a too superficial consideration. We can also see from this that God “does not present ideas of any kind he pleases to the soul on the occasion of traces in the brain,” as the author says, but only the ones which resemblance requires. And there is room to be astonished that excellent philosophers today can suppose that God acts in a way which is so arbitrary and so undetermined (that is to say, so destitute of reason) in establishing the laws of nature, whether for thoughts or for motions. This would be an insufficient use of his wisdom, which is always directed towards choosing the most suitable. So “if God had attached the sensation [*sentiment*] of taste to the trace which results in the brain on the occasion of the vibrations in the ear” (as our author thinks that he was free to do), it would be as though a painter were to represent the cupola of St. Peter by the shape of a pyramid. And then it could really be said that our senses deceived us. But in the objection that our author builds on another foundation, to the effect that someone could say that God leads us astray through our senses by making us attribute to bodies sensible qualities which are only modes (*manières*) of our minds, he supposes what is not so. For these sensible qualities are modes (*manières*) or modifications of bodies and not of our mind; and our sensations [*sensations*] are in truth ways of being of the soul, but ones which represent those of bodies. It is true that our sensations [*sentiments*] bear no resemblance to mere modifications of extension or of space, and our author has made this very clear; but I have also sufficiently well shown that there is something more in bodies than extension. As regards “the combats” that are supposed to take place “between the body and the soul,” they are nothing other than the different inclinations which arise from distinct thoughts and from confused thoughts, that is to say, from reasons and from instincts and passions. (NS 140–42)

Draft of New System of the Nature of Substances, 1694?

[85] However, the present dispositions (however inclining they may be) are never necessitating, and do not take away the contingency of the future. Indeed it is greatly increased, for each substance by itself expresses in itself the whole universe; it mirrors perfectly, from its own position or point of view, even though this combining of an infinite number of things in each one prevents it from having a distinct understanding of them. (NS 25)

[86] For I hold that even by the laws of motion, a body is never affected by the impact of another except by virtue of its own elasticity, which comes from a motion which already exists within it. But that is much more absolutely true of the indivisible substantial principle, on which, strictly speaking, no other created thing can ever act, although we attribute such action to the body whose situation is best able to explain it. (NS 26)

[87] All of this is quite independent of outside things which might make them arise in the soul, and nevertheless conformable to the rest of the universe, but particularly to the organs of the body which gives it its point of view in the world. And this is what their union consists in. (NS 27)

New System of the Nature of Substances, 1695

[88] Furthermore, the organized mass in which the point of view of the soul lies is more immediately expressed by it, and is in turn ready, just when the soul desires it, to act of itself according to the laws of the bodily mechanism (NS 18)

[89] And as the nature of the soul is to represent the universe in a very exact way (though with more or less distinctness), the succession of representations which the soul produces for itself will naturally correspond to the succession of changes in the universe itself. (NS 19)

[90] Our ordinary ways of speaking may also be easily preserved. For we may say that the substance whose state explains a change in an intelligible way (so that we may conclude that it is this substance to which the others have in this respect been adapted from the

beginning, in accordance with the order of the decrees of God) is the one which, so far as this change goes, we should therefore think of as *acting* upon the others. So the action of one substance upon another is not an emission or a transplantation of an entity as is commonly thought, and it can be reasonably understood only in the way I have just described. It is true that we can easily understand in connection with matter both the emission and the receiving of parts, by means of which we quite properly explain all the phenomena of physics mechanically. But a material mass is not a substance, and so it is clear that action as regards an actual substance can only be as I have described.

These considerations, however metaphysical they may seem, are nevertheless marvelously useful in physics for grounding the laws of motion, as my dynamics will be able to show. For we can say that when bodies collide, each one is affected only by its own elasticity, caused by the motion which is already in it. And as for absolute motion, nothing can determine it mathematically, since everything ends in relations: the result being that there is always a perfect equivalence of theories, as in astronomy; so that, whatever number of bodies we take, we may arbitrarily assign either rest or some degree of velocity to whichever we like, without it being possible for us to be refuted by the phenomena of motion, whether in a straight line, a circle, or composite. It is still reasonable however, in conformity with the notion of activity which we have established here, to attribute genuine motions to bodies in accordance with what explains the phenomena in the most intelligible way. (NS 20)

Dialogue on Human Freedom and the Origin of Evil, 25 January 1695

[91] It must be admitted, sir, that we are not completely free; only God is completely free, since he alone is independent. Our freedom is limited in many ways. . . . Sometimes we admit that we do not have a free mind. But that does not prevent us from having a certain degree of freedom that beasts do not have, that is, our faculty of reasoning and choosing in accordance with how things appear to us. (AG 112)

Leibniz to Sophie Charlotte, 4 November 1696

[92] But of all souls there are none more elevated than those which are capable of understanding eternal truths, and which not only represent the universe in a confused manner,

but also understand and have distinct ideas of the beauty and grandeur of the sovereign substance. These souls are mirrors not only of the universe (as are all souls), but also of that which is best in the universe. That is to say of God himself, and it is this which is reserved for spirits or intelligences, and which makes them capable of governing other creatures in imitation of the creator. (G VII 542–43)

[93] The movement of the planets seems to be a confused thing to we who live on the globe of the earth. It seems that these stars are wandering and that they proceed without order, often advancing and then receding, and even stopping from time to time; but when with Copernicus we place ourselves on the sun, at least with the eyes of the mind, we discover a marvelous order. So not only does everything proceed by order, but our minds must apperceive this order more and more as they make progress. (G VII 543)

[94] Thus it is not only souls but even their actions which are always conserved, and indeed the action of each [soul] conserves in itself the whole of the universe because of the conspiring and sympathizing of all things (the world being completely full in all of its parts), but more distinctly in some than in others. And this constitutes the advantage of minds, for whom the sovereign intelligence made all the rest, for the purpose of having knowledge and love, multiplying them so to speak in all these living mirrors that represent them. (G VII 544)

On Locke's *Essay on Human Understanding*, 1696

[95] I am not at all for the *tabula rasa* of Aristotle; and there is something solid in what Plato called *reminiscence*. There is even something more, for we not only have a reminiscence of all our past thoughts, but also a presentiment of all our future thoughts. It is true that this is confused and fails to distinguish them, much the way in which when I hear the noise of the sea, I hear those of all the particular waves that make up the noise as a whole, though without discerning one wave from another. Thus it is true in a certain sense, which I have explained, that not only our ideas but also our sensations arise from our own nature, and that the soul is more independent than we thought, although it is always true that nothing happens in it which is not determined, and that nothing is found in creatures that God does

not continually create. (G V 16)

[96] Concerning Book II, which turns to the subject of ideas, I confess that the reasons M. Locke gives to prove that the soul is sometimes without thought seem to me not at all convincing, unless he is calling ‘thoughts’ only those perceptions that are sufficiently notable to be distinguished and retained. I hold that the soul (and even the body) is never without action, and that the soul is never without some perception: even in a dreamless sleep we have some confused and dull [*sombre*] sensation [*sentiment*] of the place where we are, and of other things. (G V 16)

[97] As to what is said in Chapter 30 on *adequate ideas*, it is permissible to give to terms the signification that we find appropriate. Yet without finding fault with M. Locke’s meaning, I put degrees in ideas, according to which I call *adequate* those in which there is nothing more to explain, much the same as in numbers. Now since all ideas of sensible qualities, such as light, color, and heat, are not of this nature, I do not count them among the adequate. So it is not through themselves, nor *a priori*, but through experience that we know their reality or possibility. (G V 17)

[98] It is very true that we cannot define everything, and that sensible qualities have no *nominal definition*, so that we can call them primitives in this sense; but they can nonetheless be given a *real definition*. I have shown the difference between these two kinds of definition in the meditation cited above. The nominal definition explains the name by the marks of the thing; but the real definition makes known *a priori* the possibility of the thing defined. (G V 18)

Leibniz to des Billettes, 4 December 1696

[99] Bodies are multiplicities, and souls are unities, but unities which express or represent a multiplicity in themselves. Each soul is a mirror of the entire world, from its own point of view. (NS 56 = L 473)

On the Principle of Indiscernibles, c. 1696

[100] To be in a place seems, abstractly at any rate, to imply nothing but position. But in actuality, that which has a place must express place in itself; so that distance and the degree of distance involves also a degree of expressing in the thing itself a remote thing, either of affecting it or of receiving an affection from it. So, in fact, situation really involves a degree of expressions. (MP 133)

A Résumé of Metaphysics, c. 1697(?)

[101] 14. It follows also that that series has prevailed through which there arises the greatest amount of what is distinctly thinkable [*distinctae cogitabilitatis*]. (MP 146 = G VII 290)

[102] 15. Distinct cogitability [*distincta cogitabilitas*] gives order to a thing and beauty to a thinker. For order is simply a distinctive relation of several things [*relatio plurium distinctiva*]; and confusion [*confusio*] is when several things are present, but there is no way [*ratio*] of distinguishing [*distinguendi*] one from another. (MP 146 = G VII 290)

[103] 19. So when something in the series of things displeases us, that arises from a defect of our understanding. For it is not possible that every mind should understand everything distinctly [*distincte*]; and to those who observe only some parts rather than others, the harmony of the whole cannot appear. (MP 147 = G VII 290)

[104] 22. It can also be said that minds are the primary unities of the world and are the closest likenesses of the first Being, for they distinctly perceive [*distincte percipiunt*] necessary truths, that is, the reasons which moved the first Being, and must have formed the universe" (MP 147 = G VII 291).

Leibniz to Thomas Burnett, 24 August 1697

[105] ...my opinion is that the truly real and philosophical characters must correspond to the analysis of thoughts. (G III 216)

A New Method for Learning and Teaching Jurisprudence, 1697–1700

[106] *Perception* is the expression of many things in one, or in simple substance; if it is combined with the reflection of the percipient, it is called *thought*. We judge perception to apply not only to us but also to other living or organic beings, and thought to be not only in us but also (and, indeed, most perfectly) in God. (L 91–92)

Leibniz to Basnage, 1698

[107] Now, according to me it is the nature of a created substance to change continually in accordance with a certain order, which conducts it spontaneously (if one may use the word) through all its states, in such a way that someone who saw everything would see in its present state all its past and future states. And this law of order, which constitutes the individuality of each particular substance [cf. T §291], exactly corresponds to what happens in every other substance, and in the universe as a whole. . . . So in this way the law of the changes in the substance of an animal takes it from pleasure to pain just when there is a break in the continuity of its body, because the law of this animal’s indivisible substance is to represent what happens in its body, just as we know from our own cases, and indeed to represent in some fashion, by relation to this body, everything that happens in the world. Substantial unities are nothing other than different concentrations of the universe, which is represented in them in accordance with the different points of view which distinguish them. (NS 80 = G IV 518)

[108] I believe that it is [the soul’s] own God-given nature to represent to itself, in accordance with its own laws, what happens in its organs. (NS 81)

[109] “Does the internal active power which is communicated to the forms of bodies know what succession of actions it has to produce? Surely not; for we know from experience that we do not know what perceptions we will have in an hour’s time.” I reply, that this power or, better, this soul or form doesn’t know them distinctly, but senses them confusedly. In each substance there are traces of everything that has happened to it, and of everything that is going to happen. But this infinite multitude of perceptions prevents us from distinguishing

them, just as I cannot distinguish one voice from another when I hear the loud and confused noise of a crowd. (NS 83)

[110] We must also bear in mind that the soul, even though simple, always has a sensation composed of several perceptions at a time; which for our purposes has the same effect as if it were composed of parts, like a machine. For each preceding perception has an influence on succeeding ones, in conformity with a law of order which exists in perceptions as much as in motions. Moreover, for several centuries most philosophers have attributed thoughts to souls and to angels which they believe are completely incorporeal (not to mention the intelligences of Aristotle), and have also admitted spontaneous change in simple beings. I will add that the perceptions which are simultaneously together in the same soul envelop a truly infinite multitude of small indistinguishable sensations [*sentimens*] that will be developed in what follows, so one should not be astonished at the infinite variety of what emerges over time. All of this is only a consequence of the representational nature of the soul which must express what happens, and indeed what will happen, in its body, and, because of the connection or correspondence of all the parts of the world, it must also express in some way what happens in all the others. It might perhaps have been enough to say simply that God, having made corporeal machines, could also easily have made immaterial ones which represent them; but I thought it would be good to explain things a little more fully. (NS 84–85; G IV 522–23)

[111] [We err . . .] when we do not recognize the infinite in everything, and the exact expression of the greatest in the smallest (NS 85–86)

Leibniz to Bernoulli, 21 February 1699

[112] Even if the soul does not consist of parts, yet in its perceptions it expresses a thing consisting of parts, namely, the body. Since it has many perceptions at the same time, therefore, and future consequences arise naturally from present perceptions, it is not strange that so many modifications flow spontaneously from the soul. There is also no doubt that our future states are already in some way involved in our present ones, though they cannot be distinguished because of the multitude and smallness of the perceptions occurring at the

same time. (L 513 = GM III 574–57)

Leibniz to De Volder, March 24/April 3, 1699

[113] And indeed, you illustrate the point quite nicely, attributing to the soul an adequate idea of the corporeal machine; it is this very thing that I intend when I say that the nature of the soul is to represent the body. As a result, it is necessary that the soul represent to itself, in order, whatever follows from the laws of the body, some distinctly, others confusedly (namely those which involve a multitude of bodies); the former is to understand, the latter to sense. (AG 173 = L 517)

Letter to Burnett, 1699

[114] I call an idea clear when it is sufficient for recognizing a thing, as when I remember a color well enough to recognize it when it is brought to me; but I call an idea *distinct* when I conceive its conditions or requisites, in a word, when I have its definition, if it has one. Thus I do not have a distinct idea of all colors, being often required to say that it is a something-I-know-not-what that I sense very clearly, but cannot explain well. . . . When Newton publishes his book on colors we will understand them more distinctly. . . . In fact, we see that people know very well how to recognize it [i.e., substance] and distinguish it from an accident, even though they do not distinguish what it contains in its notion. It seems to me that my use of the terms clear and distinct does not depart from Descartes's, who is most responsible for making them fashionable. However, I confess that this noted author has misused ideas a little, and I am of the opinion . . . that some of those who have made so much noise about ideas today misuse them even more. Whether one talks of ideas or notions, whether one talks of distinct ideas or definitions, it is all the same (at least when an idea is not absolutely primitive). And those who determine the implications of their ideas say nothing else unless they explain them, and unless they come to their reasoning in accordance with the rules of logic. I have attempted to give a mark appropriate for discerning true ideas from false ones in an essay inserted into the Acts of Leipzig several years ago, in which I also spoke of what is lacking in Descartes's argument derived from the idea of God (AG 287–88; cf. G I 384)

Leibniz to Burnett, 1699

[115] It seems you have not considered attentively enough, Sir, what I have said of the difference between clear and distinct knowledge. However, these things require attention, for otherwise it is easy to mistake the one for the other. You do not distinguish the distinct idea in general from the adequate and perfectly distinct idea. Whenever we have a good definition, we have a distinct idea, for example when I say that green is a mixture of blue and yellow. But this knowledge is neither perfect nor adequate, for that would require us to push the analysis to the end and to have the definition of blue and yellow, for which we are waiting only on M. Newton. You can see also by this example the difference between clear and distinct. The notion we have of green, which is a more composed color, is not only clear, but also distinct, because it is accompanied by a definition or analysis, by which this notion is resolved into certain requisites or ingredients. But that of blue is only clear and not distinct. It is clear because we can recognize that which is blue or not without making a mistake; but it is not distinct, for without the understanding, we do not know distinctly in what this I-know-not-what that we sense there consists. You see therefore that a thing can be clear to the senses, without being distinct with respect to the understanding. This difference is not of my invention. The late Mons. de Worcester himself (on p.13 of his response to the second letter of M. Locke) relates a passage from M. Descartes (Princip. libr. 1. n. 44) wherein there are these words in English: “But to a certain judgment it is necessary that our perception *be not only clear but distinct.*” However neither M. de Worcester nor M. Locke have employed this difference at all in their dispute, because they believe they have no need. But I imagine that M. Locke will help himself to it in his *Essays*. Even if he does not employ the same terms, he will no doubt help himself to the thing, for the difference is too great for it to be neglected by a mind like his. Distinct knowledge requires that we know the requisites of the thing, but it does not require that we know the requisites of the requisites all the way to the first in order for it to be adequate knowledge. M. Locke has very well remarked himself in his reply that we can extract some things from imperfect, obscure, or confused ideas or knowledge, as long as they contain clear and distinct parts. (GP III 256–57)

Leibniz to the Electress Sophie, 12 June 1700

[116] I agree that there are thoughts for which we have no images or figures in the mind, and that some of these thoughts are distinct. But I do not approve of all the examples the Cartesians give; for the figure of a thousand angles put forward here is not understood distinctly any more than the idea of some great number: it is a deaf thought, as in algebra when we think with symbols in the place of things. Thus often, in order to abbreviate, we employ words when thinking without making an analysis, since it is not necessary at that time. (G VII 555)

Leibniz to the Electress Sophie, 1700-01?

[117] It is also for this reason that the unities are never alone and without company; for otherwise they would be without function and would represent nothing. The divinity is also a unity of a number of minds, and in exchange the soul or spirit is a reflection of the divinity; for the divinity represents the universe as source, so that the universe is such as he makes it, and is accommodated to that in him which is its germ or origin. And consequently God represents the universe distinctly and perfectly: but souls represent these things after the fact, and are accommodated to those which are outside of them, and it is for this reason that God is entirely free, and that we are in part in bondage in the sense that we depend on other things, and that our perceptions or representations are confused. (G VII 556)

Leibniz to the Electress Sophie, 30 November 1701

[118] As for thoughts of the soul, since they must represent what happens in the body, they cannot be distinct when the traces in the brain are confused [*confuses*]. Thus it is not necessary that thoughts, by being confused, occupy place. But it is indubitable that corporeal images become hollow [*se creusent*] and mingled [*se mêlent*], as when one throws several stones in the water at one time, for each one makes its own circles which are not in truth blurred, though they seem muddled to the spectator, who has difficulty disentangling them. (G VII 557–58)

Leibniz to Bayle, 1702?

[119] I do not know if it is possible to explain the constitution of the soul any better than by saying (1) that it is a simple substance, or what I call a true unity; (2) that this unity nevertheless expresses a multitude, that is, bodies, and that it does so as well as is possible according to its point of view, or its relations; (3) and that therefore it expresses phenomena according to the metaphysico-mathematical laws of nature, that is, according to the order most befitting to intelligence or reason. From which it follows finally (4) that the soul is an imitation of God as far as is possible for a created thing, for like him it is simple and yet also infinite, in that it contains everything implicitly through confused perceptions—though with respect to distinct perceptions it is limited, whereas everything is distinct to the sovereign substance, from which everything emanates, which is the cause of existence and of order, and is in a word the ultimate reason for things. God contains the universe eminently, and the soul or unity contains it actually, being a central mirror, though active and vital, so to speak. Indeed, we can say that each soul is a world apart, but that all these worlds agree, and represent a different relation to the same phenomena. And this is the most perfect way of multiplying beings as far as possible, and in the best way possible. (NS 131–32)

Reflections on the Doctrine of a Single Universal Spirit, 1702

[120] I have examined this matter carefully and have shown that there are in truth certain materials of thought or objects of the understanding in the soul which have not been furnished by the external senses, namely, the soul itself and its functions (*nihil est in intellectu quod non fuerit in sensu, nisi ipse intellectus*).... I find, however, that there is never any abstract thought which is not accompanied by some images or material traces, and I have established a perfect parallelism between what happens in the soul and what takes place in matter. I have shown that the soul with its functions is something distinct from matter but that it nevertheless is always accompanied by material organs and also that the soul's functions are always accompanied by organic functions which must correspond to them and that this relation is reciprocal and always will be. (L 556)

[121] In dreams and in unconsciousness nature has given us an example which should con-

vince us that death is not a cessation of all functions but only a suspension of certain more noticeable ones. Elsewhere I have explained an important point whose neglect has led men the more easily to accept the opinion that the soul is mortal. It is that a large number of small perceptions which are equal and balanced among themselves, with nothing to give them relief or distinguish [*distinguant*] them from each other, are not noticed [*remarquées*] at all and cannot be remembered. But to conclude from this that the soul is without any function at all would be like the popular belief that there is a void or nothing at all wherever there is no noticeable [*notable*] matter or that the earth does not move because its movement, being uniform and without jerks, is unnoticeable [*remarquable*]. We have an infinity of little perceptions which we are incapable of distinguishing [*distinguer*]. A great stupefying roar, as, for example, the murmur of a large assemblage, is composed of all the little murmurs of individual persons which are not noticed [*remarqueroit*] at all but of which one must nevertheless have some sensation [*sentiment*]; otherwise one would not sense [*sentiroit*] the whole. Thus when an animal is deprived of organs capable of giving it sufficiently distinguished [*distinguées*] perceptions, it does not follow that the animal has left no smaller and more uniform perceptions or that it is deprived of all its organs and all its perceptions. Its organs are merely enveloped and reduced to a small volume, but the order of nature requires that everything be developed again sometime and return to a noticeable [*remarquable*] state and that there be a definite well-regulated progression in its changes which helps to bring things to fruition and perfection. (L 557–58)

Reply to the Comments in Bayle’s Article “Rorarius”, 1702 (published in 1716)

[122] Moreover, since bodies are not atoms, but divisible—and indeed actually divided—to infinity, and since everything is filled with them, it follows that the smallest little body is individually affected by the smallest of changes in any of the others, however distant and however small it may be, and so must be an exact mirror of the universe. This means that a sufficiently penetrating mind would, in proportion to its penetration, be able to see and foresee in each corpuscle what is happening and what will happen both in that corpuscle and outside it. So nothing happens to it, not even as a result of the impact of surrounding bodies, which does not follow from what is already internal to it, or which disturbs its internal order.

(NS 110–11)

[123] Everything that ambition or whatever other passion produces in Caesar’s soul is also represented in his body; and all the movements involved in these passions come from impressions of objects connected to internal movements. And the body is so constructed that the soul never makes decisions to which bodily movements do not correspond, even the most abstract reasonings having their place there, through the symbols which represent them to the imagination. (NS 112)

[124] For there is no individual thing which must not express all the others, in such a way that the soul, because of the variety of its *modifications*, should be compared not with a *material atom*, but rather with the *universe* which it represents from its own *point of view*, and in a way even with God, whose *infinity* it represents *finitely* (because of its confused and imperfect perception of the infinite). (NS 115–16)

[125] [Why shouldn’t it be the case with all thoughts that the soul passes spontaneously from one to the other, as it passes from premises to conclusion, etc.?] It is perhaps that people have thought that confused thoughts differ *toto genere* from distinct ones, whereas they are only less distinguished and less developed because of their multiplicity. This has meant that certain movements, which are rightly called involuntary, have been attributed to the body to such an extent that they have been believed to have nothing corresponding to them in the soul: and conversely it has been thought that certain abstract thoughts were not represented in the body. But both of these are mistaken, as often happens with this sort of distinction, for we have taken note only of what is most obvious. The most abstract thoughts need some imagination: and when we consider what confused thoughts (which invariably accompany the most distinct that we can have) are, we realize that they always involve the infinite, and not only what happens in our body but also, by means of it, what happens elsewhere. Confused thoughts thus serve our purpose as the tool which seemed necessary for the functions I attribute to the soul much better than the legion of substances of which M. Bayle speaks. . . . But (says M. Bayle) “would it then not be necessary that it

know (distinctly) the sequence of notes, and be thinking (distinctly) about them?" I reply that this is not so: it is enough for them to be enveloped in its confused thoughts; otherwise, every *entelechy* would be God. For God distinctly and perfectly expresses everything at once, the possible and the actual, past, present, and future. He is the universal source of everything, and created monads imitate him as far as created things can: he has made them the sources of their phenomena, which contain relations to everything, more or less distinct [*distincte*] according to the degree of perfection of each substance. . . . everyone who accepts immaterial indivisible substances attributes to them a simultaneous multitude of perceptions, and a *spontaneity* in their reasonings and their voluntary acts. I am therefore only extending that *spontaneity* to their confused and involuntary thoughts, and showing that their nature is to contain relations with everything that is external. . . . Otherwise the soul would be a God, when it is enough for it to be a little world, that is as imperturbable as the big one, once we realize that there is just as much spontaneity in the confused, as in the distinct. In another sense, however, it is reasonable to call those things which consist in confused thoughts, and in which there is involuntariness and incomprehension, perturbations (as the ancients did) or passions. And this is what in ordinary speech we not unreasonably attribute to the conflict of the body with the mind, since our confused thoughts represent the body or the flesh, and constitute our imperfection. . . . When I gave substantially this response before, that *confused perceptions envelop all that is external*, and involve infinite relations, (NS 117–18)

Remarks on Lamy, November 1702

[126] For I hold that not only the soul and the body, but also all other created substances in the universe are made for each other, and mutually express one another, though they may be related either more or less closely depending on the closeness of the relation. It can thus be said that in the intentions of God and in the order of final causes, one substance depends on another; for God considered one when producing the other, even though so far as physical influence, or efficient causation, goes, they have as little dependence on each other as if each were alone in the world with God. (G IV 578 = NS 153)

[127] We have to distinguish between voluntary thoughts, which no doubt are free, and involuntary thoughts, like sensations [*sentimens*] of pain, for example. Now it is always God who produces these sensations [*sentimens*]. . . . In [my system] he does it through the constitution of the soul, in that it must express the body. These sensations [*sentimens*] then are not free, and nor should they be, since they are not voluntary, and I cannot see why they are contrary to the wisdom of God in my system any more than in the others. And their occurrence is not without cause and without reason, since they happen because the soul must express the body. (G IV 579 = NS 153–54)

[128] And according to me [these wildnesses] come only from the soul, whether through its will or as a result of the involuntary perceptions which arise in it because its nature is to express the body, perceptions which I put in place of the influences of the body. (G IV 583 = NS 158)

Leibniz to Bayle, 5 December 1702

[129] Now, internal changes in simple things are of the same kind as that which we understand to be in thought, and we can say in general that perception is *the expression of a multitude in a unity*. (NS 130)

Leibniz to Bayle, 1702?

[130] I do not know if it is possible to explain the constitution of the soul any better than by saying (1) that it is a simple substance, or what I call a true unity; (2) that this unity nevertheless expresses a multitude, that is, bodies, and that it does so as well as is possible according to its point of view, or its relations; (3) and that therefore it expresses phenomena according to the metaphysico-mathematical laws of nature, that is, according to the order most befitting to intelligence or reason. (NS 131–32)

Letter to Queen Sophie Charlotte, 1702

[131] We use the external senses as a blind man uses his stick, following the comparison used by an ancient writer, and they allow us to know their particular objects, which are colors,

sounds, odors, flavors, and the tactile qualities. But they do not allow us to know what these sensible qualities are, nor what they consist in, for example, whether red is the rotation of certain small globes which, it is claimed, make up light, whether heat is a vortex of very fine dust, whether sound is produced in air as circles are in water when a stone is tossed in, as some philosophers claim. We do not see these things, and we cannot even understand why this rotation, these vortices, and these circles, if they are real, should bring about exactly the perceptions we have of red, heat, and noise. Thus it can be said that *sensible qualities* are in fact occult qualities, and there must be others *more manifest* that can render them more understandable. Far from understanding only sensible things, it is precisely these we understand the least. And although they are familiar to us, we do not understand them any better for it, just as a pilot does not understand the nature of the magnetic needle that turns toward the north any better than anyone else does, though it is always before his eyes in the compass, and as a result, it hardly astonishes him.

[132] I do not deny that many discoveries have been made about the nature of these occult qualities; for example, we know what kind of refraction produces blue and yellow, and that the mixing of these two colors produces green. But for all this we do not yet understand how the perception we have of these three colors results from these causes. Also, we do not even have nominal definitions of such qualities, definitions by which to explain the terms. The purpose of nominal definitions is to give marks sufficient for recognizing things. For example, assayers have marks by which they distinguish gold from any other metal, and even if a person had never seen gold, he can be taught these infallible marks for recognizing it, should he encounter it one day. But it is not the same with these sensible qualities. For example, one cannot give marks for recognizing blue, if one has not seen it. Hence, blue is its own mark, and in order for someone to know what blue is, we must necessarily show it to him.

[133] It is for this reason that it is usually said that the *notions* of these qualities are *clear*, for they help us to recognize the qualities, but that these same notions are not *distinct*, because we can neither distinguish nor unfold what they contain. What we perceive is a *something I know not what*, but a something for which we cannot give an account. On the other hand,

we can make another person understand what the thing is when we have a description or nominal definition, even though we do not have the thing at hand to show him. Yet we must do justice to the senses by acknowledging that, besides these occult qualities, they allow us to recognize other, more manifest, qualities which furnish us with more distinct notions. . . . (AG 186–87)

Leibniz to Sophie Charlotte, 1702?

[134] I find that the learned author of the letter that Your Majesty has had the grace to send me undertakes to prove against me that which I do not deny, that is, that we have need of sense organs to have our thoughts. If he had taken the liberty of informing himself of my sentiments, he would have found that I establish an exact relation between soul and body, and I believe that even the more abstract thoughts are represented by some traces in the brain, according to the manner that I have explained elsewhere; since I believe that even the motions of the most voluntary bodies nevertheless make impressions on the soul, although we do not notice them, because they are too uniform, or based on impressions [which are] too confused and to which we are too accustomed.

But because the soul has so much need of the senses, and because the natural order requires that the soul always subsist, as we shall explain sometime, it follows that it can never fail to have organs which are more or less expressive, by being more or less sensible according to their different states. Thus, though it can be found in a state of dullness, it does not fail at the same time to have some sensation [*sentimens*] and some usage of certain organs, which do not receive impressions strong enough, or ordered enough, the soul too having only perceptions which are muddled [*embrouillées*] or too small and almost equal or balanced between them, having nothing that stands in relief and distinguishes itself enough to attract our attention, and which we can consequently remember. Such is the state of infancy and of the time that precedes it. This is also the state of a profound sleep, of a fainting spell, and even of death.

It is much like when one is deafened by a great noise, composed of many small sounds which cannot be discerned, in which there is no noticeable order or harmony. It is thus that we hear the noise of the waves of the sea, which we could not hear if we did not have some

petite perception of each wave.

But if the sound lasted forever in our ears, if we did not hear any other thing, and even if the rest of our organs and also our memory furnished us with nothing remarkable, that sound itself would no longer be noticeable, and we would be entirely stupid, even though the confused perception would linger on: it is in this way that we are scatterbrained by a canon shot, dazzled by a great light, seized by an epileptic convulsion, the violence multiplying too much and confounding the motions of the organs.

It is the same when organs that are too relaxed do not yield impressions strong enough, those harming too much and those harming too little equally. It may be, however, that what we do not find sensible enough now that we are accustomed to being excited only by stronger impressions could become more noticeable in the silence of any one of our senses, like those accustomed to meats of high taste who almost do not detect the taste of others, to the extent that they had quit the excessive usage of the former.

Now when this confusion of perceptions is universal and of some duration, where nothing can be distinguished, it passes (in the vulgar opinion) to a complete cessation of functions, and even to an extinction of the animal, and according to some people to an extinction of the same soul, according to others to a separation of the soul from the body. But when separated, it is never entirely apart from all bodies; the soul always remains united to some organic (though very subtle) thing, and whenever we can straighten out the matter, the soul has to be noticed too. The soul and even the animal are extinct no more, and the cessation of the functions of the soul is only apparent, because there are no remarkable perceptions, as I just explained. This is a great source of errors here, which takes the cessation or rather suspension of distinct thoughts for a cessation of all thoughts: and through lack of consideration of an explanation such as the one I just gave, a good many people have leaned to the side of the mortality of the soul. This is the same error as that of the vulgar, when they believe that there is a void wherever there is a uniform movement, like that of the earth, which is without jolts.

Those who meditate on the laws of nature will find that no impression gets lost even in matter. This is somewhat like when one throws several stones into the water at one time and each makes circles that cross without destroying each other, but when the number of

stones is too great, the eyes confound them. (G VI 514–19)

Leibniz to Queen Sophie Charlotte, 170?

[135] In death or the appearance of death (for I think of it as only an enveloping) we lose neither life, nor sensation [*sentiment*], nor reason; but that which prevents us from apperceiving for a time, that is confusion, which is to say that we have at that moment an infinity of *petites perceptions* which do not distinguish themselves from the others. That is why in a barely distinct dream and in a fainting spell we recall life.

Moreover the order of degrees in the suspension of activities is not always observed in the way I have noted above, as if it belonged to reason to stop first, for we reason sometimes in dreams, although we do not then sense, for we always sense confusedly. (G VI 522)

Leibniz to De Volder, 20 June 1703

[136] You seem to have rightly grasped my doctrine of how every body whatever expresses all other things, and how every soul or entelechy whatever expresses its own body and through it all other things. But when you have uncovered the full force of this doctrine, you will find that I have said nothing else which does not follow from it. (L 531 = AG 178)

Reply to Lamy's Objections, 1704 (published 1709)

[137] The soul is free in its voluntary actions, when it has distinct thoughts and shows reason; but since confused perceptions are dependent on the body, they arise from preceding confused perceptions, without the soul's necessarily wanting them, or foreseeing them. So although pains do not come to the soul because it wants them, this does not mean that they therefore come to it without cause or without reason, for the sequence of confused perceptions is representative of the motions of the body, the great number and small size of which do not allow them to be apperceived distinctly. (NS 166 = G IV 591)

[138] Confused perceptions are ordered just like the laws of the motions which they represent. The motions of bodies are explained by efficient causes, but in the distinct perceptions of the soul, where there is liberty, final causes reappear. But there is order in the one of

these *series* just as much as in the other. (NS 167)

[139] When there is a disturbance in the body, it is natural that our confused perceptions should represent it. (NS 167; cf. 169–70)

Leibniz to Jaquelot, 9 February 1704

[140] The miracle or rather the marvel consists in this: that each each substance is a representation of the universe from its own point of view. This is the greatest richness and perfection that can be attributed to created things and to the operations of the Creator; it is like a reduplication of worlds in innumerable mirroring substances, by means of which the universe is infinitely varied. These simple substances, once they have begun, are all like separate little divinities, because as for an end, they have none. Now, having established the point about the representation of the universe in each monad, the rest is only consequences, and your questions, Sir, seem to answer themselves. (G III 465–66 = NS 176)

[141] . . . souls are never inactive, and never without thoughts, although those thoughts are confused and obscure when the phenomena do not contain anything very striking or distinguished. (NS 176)

[142] For there is nothing in the soul which is not also expressed in the organs of the body. (NS 176)

[143] There is always something in our imagination corresponding to our ideas, even those of immaterial things—consider symbols such as those in arithmetic and algebra, and also names (NS 177)

Leibniz to Jaquelot, n.d.

[144] Why should that chimera or false invention of the scholastics (because ordinary people will have none of it when it is explained to them) be any more important than the fancy of those same scholastics that the heat that we feel is an absolute entity, and not a phantom

depending partly on our own constitution at the time? (NS 197)

Leibniz to Masham, May 1704

[145] This leads me to think that there are such active beings everywhere in matter, and that they differ only in the manner of their perception. (NS 204)

[146] ...souls are in their primordial nature expressive of bodies, insofar as they have to represent them through their involuntary and confused perceptions. In this way each is sometimes the original and sometimes the copy of the other, in proportion to the perfections or imperfections it contains. . . . (NS 207)

Leibniz to Lady Masham, September 1704

[147] I can well believe, Madam, that you have no image of a non-extended substance; but that does not prevent you from having a notion of one. . . . But if our having a conception depended on our having a sufficient analysis of it, then many geometers would not even have the conception of a straight line, for it must be realized that our image of it is not the distinct idea of it, and does not suffice for demonstrating its properties. (NS 219)

Leibniz to Sophie Charlotte, 8 May 1704

[148] But as our own perceptions are sometimes accompanied by reflection and sometimes not, and are sometimes more and sometimes less clear and distinct, it is easy to see that there must be living beings whose perception will be obscure and confused, and who even have no reflection, which in us is the mother of the sciences. (NS 221)

[149] So that even in our instinctive or involuntary actions, where it seems only the body plays a part, there is in the soul a desire for good or an aversion to evil which directs it, even though our reflection is not able to pick it out in the confusion. . . . desire moves the soul from image to image. Thus the soul is made dominant beforehand, and is obeyed by bodies insofar as its desire is accompanied by distinct [*distinctes*] perceptions, which enable it to think up suitable ways of getting what it wants; but it is made subject to the body

beforehand, insofar as it tends toward confused perceptions. For we know by experience that all things tend towards change, the body by moving force, the soul by desire, which brings it to distinct or confused perceptions according as it is more or less perfect. . . . all souls are essentially representations or living mirrors of the universe, according to their own particular capacity and point of view (NS 224–25)

Leibniz to Jaquelot, 4 September 1704

[150] Now, everything that is distinct in the mind of God is confused and imperfect in our own. Thus our future actions are in us, but only as a kind of inclination, which carries no necessity with it, even though from the point of view of God it is certain. (NS 188)

[151] Do we not believe, if not corrected by reason, that heat in water is something absolute and determinate, which everyone must feel as we do, and that the sun is only a few feet in diameter, and the heavens move, and a thousand other illusions and prejudices which come from misunderstanding our senses, and from ill-disciplined habits of mind? (NS 189)

New Essays on Human Understanding, 1704

[152] This is how ideas and truths are innate in us—as inclinations, dispositions, tendencies, or natural potentialities, and not as actualities [or actions]; although these potentialities are always accompanied by certain actualities, often insensible ones, which correspond to them. (NE 52)

[153] Besides, there are hundreds of indications leading us to conclude that at every moment there is in us an infinity of perceptions, unaccompanied by awareness or reflection; that is, of alterations in the soul itself, of which we are unaware because these impressions are either too minute and too numerous, or else too unvarying, so that they are not sufficiently distinctive on their own. But when they are combined with others they do nevertheless have their effect and make themselves felt, at least confusedly, within the whole. This is how we become so accustomed to the motion of a mill or a waterfall, after living beside it for a while, that we pay no heed to it. Not that this motion ceases to strike on our sense-organs,

or that something corresponding to it does not still occur in the soul because of the harmony between the soul and the body; but these impressions in the soul and the body, lacking the appeal of novelty, are not forceful enough to attract our attention and our memory, which are applied only to more compelling objects. . . . To give a clearer idea of these minute perceptions which we are unable to pick out from the crowd, I like to use the example of the roaring noise of the sea which impresses itself on us when we are standing on the shore. To hear this noise as we do, we must hear the parts which make up this whole, that is the noise of each wave, although each of these little noises makes itself known only when combined confusedly with all the others, and would not be noticed if the wave which made it were by itself. We must be affected slightly by the motion of this wave, and have some perception of each of these noises, however faint they may be; otherwise there would be no perception of a hundred thousand waves, since a hundred thousand nothings cannot make something. (NE 53–54)

[154] These minute perceptions, then, are more effective in their results than has been recognized. They constitute that *je ne sais quoi*, those flavors, those images of sensible qualities, vivid in the aggregate but confused as to the parts; those impressions which are made on us by the bodies around us and which involve the infinite; that connection that each being has with all the rest of the universe. It can even be said that by virtue of these minute perceptions the present is big with the future and burdened with the past, that all things harmonize—*sympnoia panta*, as Hippocrates put it—and that eyes as piercing as God’s could read in the lowliest substance the universe’s whole sequence of events—”What is, what was, and what will soon be brought in by the future” [Virgil]. (NE 54–55)

[155] These insensible perceptions also indicate and constitute the same individual, who is characterized by the vestiges or expressions which the perceptions preserve from the individual’s former states, thereby connecting these with his present state, even when the individual himself has no sense of the previous states, i.e., no longer has any explicit memory of them, they could be known by a superior mind. But those perceptions also provide the means for recovering this memory at need, as a result of successive improvements which one may

eventually undergo. That is why death can only be a sleep, and not a lasting one at that: the perceptions merely cease to be sufficiently distinguished [*distinguées*]; in animals they are reduced to a state of confusion which puts awareness into abeyance but which cannot last forever. (NE 55)

[156] They are also the insensible parts of our sensible perceptions, which bring it about that those perceptions of colors, warmth and other sensible qualities are related to the motions in bodies which correspond to them; whereas the Cartesians (like our author, discerning as he is), regard it as arbitrary what perceptions we have of these qualities, as if God had given them to the soul according to his good pleasure, without concern for any essential relation between perceptions and their objects. This is a view which surprises me and appears unworthy of the wisdom of the author of things, who does nothing without harmony and reason. (NE 56)

[157] This knowledge of insensible perceptions also explains why and how two souls of the same species, human or otherwise, never leave the hands of the Creator perfectly alike, each of them having its own inherent relationship to the point of view which it will have in the universe. But that follows from what I have already said about individuals, namely that the difference between them is always more than numerical. (NE 58)

[158] In my opinion he has not adequately distinguished the origin of necessary truths, whose source is in the understanding, from that of truths of fact, which are drawn from sense-experience and even from confused perceptions within us. (NE 75)

[159] I grant you the point, as applied to pure ideas, which I contrast with images of sense, and as applied to necessary truths or truths of reason, which I contrast with truths of fact. (NE 77)

[160] For through an admirable economy of nature we cannot have abstract thoughts which have no need of something sensible, even if only characters such as the sounds and shapes

of letters; though there is no necessary connection between such arbitrary characters and such thoughts. And if these sensible traces were not required, the harmony pre-established between the soul and the body, which I shall later have an opportunity to talk to you about more fully, would not obtain. (NE 77)

[161] But the ideas that come from the senses are confused; and so too, at least in part, are the truths which depend on them; whereas intellectual ideas, and the truths depending on them, are distinct, and neither [the ideas nor the truths] originate in the senses; though it is true that without the senses we would never think of them. (NE 81)

[162] But I have already replied that every sensation [*sentiment*] is the perception of a truth, and that the natural sensation [*sentiment*] is [the perception] of an innate truth, but very often confused, as are the experiences of the external senses: thus we can distinguish the innate truths from the natural light (which contains only what is distinctly knowable), as the genus must be distinguished from its species, since the innate truths comprehend the instincts as much as the natural light. (NE 94)

[163] These writings in inner light would sparkle continuously in the understanding, and would give warmth to the will, if the confused perceptions of the senses did not monopolize our attention. (NE 100)

[164] Knowledge, ideas and truths can be in our minds without our ever having actually thought about them. They are merely natural tendencies, that is dispositions and attitudes, active or passive, and more than a *tabula rasa*. (NE 106)

[165] Phil: Is it not true that an “idea is the object of thinking”?—Theo: I agree about that, provided that you add that an idea is an immediate inner object, and that this object expresses the nature or qualities of things. If the idea were the *form* of the thought, it would come into and go out of existence with the actual thoughts which correspond to it, but since it is the *object* of thought it can exist before and after the thoughts. Sensible outer objects

are only *mediate*, because they cannot act immediately on the soul. God is the only *immediate outer* object. One might say that the soul itself is its own immediate inner object; but that is only to the extent that it contains ideas, i.e., something corresponding to things. For the soul is a little world where distinct ideas represent God and confused ones represent the universe. (NE 109)

[166] For the soul is a little world where distinct ideas represent God and confused ones represent the universe. (NE 109)

[167] One settles it [whether I thought all last night] in the same way that one proves that there are imperceptible bodies and invisible movements, though some people make fun of them. In the same way there are countless inconspicuous perceptions, which do not stand out enough for one to be aware of or to remember them but which manifest themselves through their inevitable consequences. (NE 112)

[168] Bear in mind that we do think of many things all at once, but pay heed only to the thoughts that are more distinguished [*distinguées*]. That is inevitable; for if we were to take note of everything, we should have to direct our attention on an infinity of things at the same time—things which impress themselves on our senses and which are all sensed by us. And I would go further: something remains of all our past thoughts, none of which can ever be entirely wiped out. When we are in dreamless sleep, or when we are dazed by some blow or a fall or a symptom of an illness or other mishap, an infinity of small, confused sensations occur in us. Death itself cannot affect the souls of animals in any way but that; they must certainly regain their distinguished [*distinguées*] perceptions sooner or later, for in nature everything is orderly. I admit, though, that in that confused state the soul would be without pleasure and pain, for they are noticeable perceptions [*perceptions notable*]. (NE 113)

[169] The perceptions of the soul always correspond naturally to the state of the body; and when there are many confused and not very distinguished motions in the brain, as happens with those who have had little experience, it naturally follows that the thoughts of the soul

cannot be distinct [*distinctes*] either. But the soul is never deprived of the aid of *sensation* [*sensation*]; for it always expresses its body, and this body is always affected in infinitely many ways by surrounding things, though often they provide only a confused impression. (NE 117)

[170] It can be maintained, I believe, that these sensible ideas appear simple because they are confused and thus do not provide the mind with any way of making discriminations within what they contain; just like distant things which appear rounded because one cannot discern their angles, even though one is receiving some confused impression from them. It is obvious that green, for instance, comes from a mixture of blue and yellow; which makes it credible that the idea of green is composed of the ideas of those two colors, although the idea of green appears to us as simple as that of blue, or as that of warmth. So these ideas of blue and of warmth should also be regarded as simple only in appearance. I freely admit that we treat them as simple ideas, because we are at any rate not aware of any divisions within them; but we should undertake the analysis of them by means of further experiments, and by means of reason in so far as they can be made more capable of being treated by the intellect. [And it is also seen thereby that there are perceptions which we do not at all apperceive. For the perceptions of ideas simple in appearance are composed of the perceptions of the parts of which these ideas are composed, without the mind apperceiving them, for these confused ideas appear simple to it]. (NE 120)

[171] But I also hold that the ideas of extension and solidity do not consist in a *je ne sais quoi*, like the idea of the color scarlet. (NE 127)

[172] I think it could be said that when a power is intelligible and admits of being distinctly explained, it should be included among the primary qualities, but when it is merely sensible and yields only a confused idea it should be put among the secondary qualities. (NE 130; cf. L 663)

[173] It must not be thought that ideas such as those of color and pain are arbitrary and

that between them and their causes there is no relation or natural connection: it is not God's way to act in such an unruly and unreasoned fashion. I would say rather that there is a kind (*maniere* of resemblance not complete and, so to speak, *in terminis*, but expressive, or a relation of order, just as an ellipse, and even a parabola or hyperbola, resemble in some fashion the circle of which they are the projection on the plane, since there is a certain exact and natural relation between what is *projected* and the projection that it makes, each point of the one corresponding according to a certain relation to each point of the other. This is something which the Cartesians have overlooked; and on this occasion, sir, you have deferred to them more than is your wont and more than you had grounds for doing. (NE 131)

[174] I have just pointed out how there is a resemblance, i.e. a precise relationship, in the case of secondary qualities as well as of primary. It is thoroughly reasonable that the effect should correspond to the cause; and how could one ever be sure that it does not, since we have no distinct knowledge either of the sensation of blue (for instance) or of the motions which produce it? It is true that pain does not resemble the movement of a pin; but it might thoroughly resemble the motions which the pin causes in our body, and might represent them in the soul; and I have not the least doubt that it does. That is why we say that the pain is in our body and not in the pin, although we say that the light is in the fire; because there are motions in the fire which the senses cannot clearly detect individually, but which form a confusion—a running together—which is brought within reach of the senses and is represented to us by the idea of light. (NE 131–32).

[175] The most that it shows is that warmth is not a sensible quality (i.e., a power of being sensorily detected) of an entirely absolute kind, but rather depends upon the associated organs; for a movement in the hand itself can combine with that of warmth, altering its appearance. Again, light does not appear to malformed eyes, and when eyes are full of bright light they cannot see a dimmer one. Even the primary qualities (as you call them), such as unity and number, can fail to appear as they should; for, as M. Descartes has already reported, a globe appears double when it is touched with the fingers in a certain way, and an object is multiplied when seen in a mirror or through a glass into which facets have been cut.

So, from the fact that something does not always appear the same, it does not follow that it is not a quality of the object, or that its image does not resemble it. As for warmth: when our hand is very warm, the lesser warmth of the water does not make itself felt, and serves rather to moderate the warmth of the hand, so that the water appears to us to be cold; just as salt water from the Baltic, when mixed with water from the Sea of Portugal, lessens its degree of salinity even though it is itself saline. So there is a sense in which the warmth can be said to inhere in the water in a bath, even if the water appears cold to someone; just as we describe honey in absolute terms as sweet, and silver as white, even though to certain invalids one appears sour and the other yellow; for things are named according to what is most usual. None of this alters the fact that when the organ and the intervening medium are properly constituted, the internal bodily motions and the ideas which represent them to the soul resemble the motions of the object which cause the color, the warmth, the pain etc.; or—what is here the same thing—they express the object through some rather precise relationship; though this relation does not appear distinctly to us, because we cannot disentangle this multitude of minute impressions, whether in our soul or in our body or in what lies outside us. (NE 132–33).

[176] I would venture to say that if the melted or blanched wax were sentient, it too would feel something like what we feel when the sun warms us, and it would say if it could that the sun is hot. This is not because the wax's whiteness resembles the sun, for in that case the brown of a face tanned by the sun would also resemble it; but because at that time there are motions in the wax which have a relationship with the motions in the sun which cause them. There could be some other cause for the wax's whiteness, but not for the motions which it has undergone in receiving whiteness from the sun. (NE 133).

[177] I would prefer to distinguish between *perception* and *being apperceived*. For instance, a perception of light or color of which we are aware is made up of many minute perceptions of which we are unaware; and a noise which we perceive but do not attend to is brought within reach of our awareness by a tiny increase or addition. If the previous noise had no effect on the soul, this minute addition would have none either, nor would the total. (NE 134)

[178] However, we find that men born blind are capable of learning geometry, and indeed always have some rudiments of a natural geometry; and we find that geometry is mostly learned by sight alone without employing touch, as could and indeed must be done by a paralytic or by anyone else to whom touch is virtually denied. These two geometries, the blind man's and the paralytic's, must come together, and agree, and indeed ultimately rest on the same ideas, even though they have no images in common. Which shows yet again how essential it is to distinguish *images* from *exact ideas* which are composed of definitions. It would indeed be very interesting and even informative to investigate thoroughly the ideas of someone born blind, and to hear how he would describe shapes. For he could achieve that, and could even understand optical theory insofar as it rests on distinct mathematical ideas, though he would not be able to achieve a conception of the *vivid-confused*, i.e., of the image of light and colors. That is why one man born blind, who had heard lessons in optics and appeared to understand them quite well, when he was asked what he believed light was, replied that he supposed it must be something pleasant like sugar. Similarly, it would be very important to investigate the ideas which a man born deaf and dumb can have about things without shapes: we ordinarily have the description of such things in words, but he would have to have it in an entirely different manner—though it might be equivalent to ours (NE 137)

[179] But when a man is reduced to a state where it is as though he were in a coma, and where he has almost no sensation, he does lose reflection and awareness, and gives no thought to general truths. Nevertheless, his faculties and dispositions, both innate and acquired, and even the impressions which he receives in this state of confusion, still continue: they are not obliterated though they are forgotten. Some day their turn will come to contribute to some noticeable result; for nothing in nature is useless, all confusion must be resolved, and even the animals, which have sunk into a condition of stupidity, must return at last to perceptions of a higher degree. (NE 139)

[180] We are never without perceptions, but it is necessary that we are often without *ap-*

perceptions, namely when there are no distinguished [*distinguées*] perceptions. (NE 162)

[181] For I would prefer to say that a desire in itself involves only a disposition to suffering, a preparation for it, rather than a suffering itself. It is true that this perception sometimes differs only in degree from what is involved in suffering; but it is of the essence of suffering to be of a certain degree, for it is a notable perception [*perception notable*]. . . . So this is another case requiring our doctrine about perceptions which are too minute for us to apperceive them; for if what goes on in us when we have appetite and desire were sufficiently amplified, it would cause suffering. That is why the infinitely wise Author of our being was acting in our interests when he brought it about that we are often ignorant and subject to confused perceptions—so that we could act the more quickly by instinct, and not be troubled by excessively distinct [*distinctes*] sensations of hosts of objects which, necessary though they are to nature's plan, are not entirely agreeable to us. . . . By the same device, nature has given us the spurs of desire in the form of the rudiments or elements of suffering, semi-suffering one might say, or (to put it extravagantly just for the sake of emphasis) of minute sufferings of which we cannot be aware. This lets us enjoy the benefit of discomfort without enduring its inconveniences; for otherwise, if this perception were too distinct [*distincte*], one would always be miserable when looking forward to something good; whereas our continual victory over these semi-sufferings—a victory we feel when we follow our desires and somehow satisfy this or that appetite or itch—provides us with many semi-pleasures; and the continuation and accumulation of these (as with the continuing thrust of a heavy body gaining impetus as it falls) eventually becomes a whole, genuine pleasure. In fact, without these semi-sufferings there would be no pleasure at all, nor any way of being aware [*s'appercevoir*] that something is helping and relieving us by removing obstacles which stand between us and our ease. . . . This account of tiny aids, imperceptible little escapes and releases of a thwarted endeavor, which finally generate notable pleasure, also provides a somewhat more distinct [*distincte*] knowledge of our inevitably confused ideas of pleasure and of pain; just as the sensation of warmth or of light results from many tiny motions which, as I said earlier, express the motions in objects, and are different from them only in appearance, and that only because we are not aware of [*appercevons*] this analyzed multiplicity. . . . But to return to disquiet,

i.e. to the imperceptible little urges which keep us constantly in suspense: these are confused stimuli, so that we often do not know what it is that we lack. With inclinations and passions, on the other hand, we at least know what we want; though confused perceptions come into their way of acting too, and though passions give rise further to the disquiet or itch which is under discussion. (NE 164–66).

[182] The ideas which you have just listed are fundamentally composite: those of sensible qualities retain their place among the simple ideas only because of our ignorance; and the others [of power, extension, duration, number], which are distinctly known, keep their place there only because of an indulgence which it would be better not to grant them. (NE 170)

[183] I shall say that volition is the effort or endeavor (*conatus*) to move toward what one finds good and away from what one finds bad, the endeavor arising immediately out of one's apperception of those things. (NE 172)

[184] We apperceive many things, within ourselves and around us, which we do not understand; and we *understand* them when we have distinct [*distinctes*] ideas of them accompanied by the power to reflect and to derive necessary truths from those ideas. That is why the beasts have no understanding, at least in this sense; although they have the faculty for apperception of the more remarkable [*remarquables*] and distinguished [*distinguées*] impressions—as when a wild boar apperceives someone who is shouting at it, and goes straight at that person, of whom it previously had only a perception that is bare, but confused as to all other objects, which stand before its eyes and reflect light-rays into the lenses. So 'understanding' in my sense is what in Latin is called *intellectus*, and the exercise of this faculty is called 'intellection', which is a distinct [*distincte*] perception combined with a faculty of reflection, which is not in beasts. Any perception which is combined with this faculty is a thought, and I do not allow thought to beasts anymore than I do to understanding. So one can say that intellection occurs when the thought is distinct [*distincte*]. (NE 173)

[185] The freedom to will is also understood in two different senses: one of them stands in

contrast with the imperfection or bondage of the mind, which is an imposition or constraint, though an inner one like that which the passions impose; and the other sense is employed when freedom is contrasted with necessity. Employing the former sense, the Stoics said that only the wise man is free; and one's mind is indeed not free when it is possessed by a great passion, for then one cannot will as one should, i.e., with proper deliberation. It is in that way that God alone is perfectly free, and that created minds are free only in proportion as they are above passion; and this is a kind of freedom which pertains strictly to our understanding. (NE 175)

[186] If everything which acts without impediment were therefore 'free', a ball which had been set in motion along a smooth trajectory would then be a free agent. But Aristotle has rightly noted that we are not prepared to call an action 'free' unless as well as being *spontaneous* it is also *deliberate* [*Nic. Ethics* III, 1111^b6]. (NE 175–76)

[187] A further point: involuntary thoughts come to us partly from without, through objects' affecting our senses, and partly from within, as a result of the (often undetectable) traces left behind by earlier perceptions, which continue to operate and mingle with the new ones. We are passive in this respect; and even when we are awake we are visited by images—which I take to include representations not only of shapes but also of sounds and other sensible qualities—which come to us unbidden, as in dreams. (NE 177)

[188] If we do not always notice the reason which determines us, or rather by which we determine ourselves, it is because we are as little able to apperceive all the workings of our mind and of its usually confused and imperceptible thoughts as we are to sort out all the mechanisms which nature puts to work in bodies. (NE 178)

[189] [Even if they] could have the freedom to will contrary to all the impressions which may come from the understanding—which would destroy true liberty, and reason with it, and would bring us down below the beasts. (NE 180)

[190] For we can only will what we think good, and the more developed the faculty of understanding is the better are the choices of the will. And, in the other direction, insofar as a man wills *vigorously*, he determines his thoughts by his own choice instead of being determined and swept along by involuntary perceptions. (NE 180)

[191] This struggle is nothing but the conflict between different endeavors—those that come from confused thoughts and those that come from distinct ones. Confused thoughts often make themselves vividly sensed, whereas distinct ones are usually only potentially vivid: they could be actually so, if we would only apply ourselves to getting through to the senses of the words or symbols. (NE 186–87)

[192] This shows that it is reason and will that lead us towards happiness, whereas sensibility and appetite lead us only towards pleasure. Now, although pleasure cannot be given a nominal definition, any more than light or heat can, it can like them be defined causally: I believe that fundamentally pleasure is a sense of perfection, and pain a sense of imperfection, each being notable enough for one to become aware of it. For the minute insensible perceptions of some perfection or imperfection, which I have spoken of several times and which are as it were components of pleasure and of pain, constitute inclinations and propensities but not outright passions. So there are insensible inclinations of which we are not aware. There are sensible ones: we are acquainted with their existence and their objects, but have no sense of how they are constituted; these are confused inclinations which we attribute to our bodies although there is always something corresponding to them in the mind. Finally there are distinct inclinations which reason gives us: we have a sense both of their strength and of their constitution. Pleasures of this kind, which occur in the knowledge and production of order and harmony, are the most valuable. Our author is right to say that in general these inclinations, passions, pleasures, and pains belong only to the mind, or to the soul; to which I will add that in metaphysical strictness the origin of each of them is in the soul, but that nevertheless one is justified in saying that confused thoughts come from the body, since it is by considering the body and not by considering the mind that we can discover something distinct and intelligible concerning them. (NE 194-95).

[193] [T]astes are only confused perceptions (NE 201)

[194] But if we take ‘action’ to be an endeavor towards perfection, and ‘passion’ to be the opposite, then genuine substances are active only when their perceptions (for I grant perceptions to all of them) are becoming better developed and more distinct, just as they are passive only when their perceptions are becoming more confused. Consequently, in substances which are capable of pleasure and pain every action is a move towards pleasure, every passion a move towards pain. As for motion: it has only phenomenal reality, because it belongs to matter or mass, which is not strictly speaking a substance. Still, there is a semblance of action in motion, as there is a semblance of substance in mass. From that point of view a body can be said to ‘act’ when there is spontaneity in its change, and to ‘undergo passively’ when it is pushed or blocked by another body; just as with the true action or passion of a true substance, we can take to be its ‘action’, and attribute to the substance itself, any change through which it comes closer to its own perfection; and can take to be its ‘passion’, and attribute to an outside cause (though not an immediate one), any change in which the reverse happens; because the change can be explained in an intelligible way by reference to the substance itself in the former case and by reference to outer things in the latter. (NE 210–11)

[195] The senses provide us with the matter [*le matiere*] for reflections, and we could not think even of thought if we did not think with some other thing, that is, with particularities that the senses provide. And I am persuaded that created souls and minds are never without organs and never without sensations [*sensations*], as they cannot reason without characters. Some people have wanted to maintain a complete separation, and to endow the separated soul with thought-processes which could not be explained by anything we know, and which would be remote not only from our present experience but also—and far more important—from the general order of things. (NE 212)

[196] That is all true, and I said something about it earlier [p. 165]. But the color yellow is a reality, all the same, like the rainbow. Also we are apparently destined to achieve a much

higher state [of knowledge] than we are now in, and may even go on rising for ever, since corporeal nature does not contain elementary particles. If there were atoms, as our author appeared elsewhere to believe that there are, perfect knowledge of bodies could not be ‘beyond any finite being’. Lastly, if our eyes became better equipped or more penetrating, so that some colors or other qualities disappeared from our view, others would appear to arise out of them, and we should need a further increase in acuity to make them disappear too; and since matter is actually divided to infinity, this process could go on to infinity also. (NE 219)

[197] On this account of what a ‘distinct’ idea is, I do not see how to distinguish it from a ‘clear’ one. So in this matter I always follow M. Descartes’ language: for him an idea can be at once clear and confused, as are the ideas of sensible qualities which are associated with particular organs, e.g. the ideas of color and of warmth. They are clear, because we recognize them and easily tell them from one another; but they are not distinct, because we cannot distinguish their contents. Thus, we cannot define these ideas: all we can do is to make them known through examples; and, beyond that, until their inner structure has been deciphered we have to say that they are a *je ne sais quoi*. Thus, although according to us distinct ideas distinguish one object from another, so also do ideas which are clear though in themselves confused; so we do not call ‘distinct’ all the ideas which are distinguishing (i.e. which distinguish objects), but only those which are distinguished, i.e. which are in themselves distinct and which distinguish in the object the marks which make it known, thus yielding an analysis or definition. Ideas which are not like this we call ‘confused’. On this view, we are not to blame for the confusion which reigns among our ideas, for this is an imperfection in our nature: to be able to pick out the causes of odors and tastes, for instance, and the content of these qualities, is beyond us. But I am to blame for the confusion in a case where distinct ideas are within my power and it matters that I should have them, for example if I accept spurious gold as genuine because I have not conducted the tests which bring out the marks of real gold. (NE 255–56)

[198] Still, this *clear image* that one may have of a regular ten-sided figure or of a 99-pound weight—this accurate sense that one may have of them—consists merely in a *confused idea*:

it does not serve to reveal the nature and properties of the figure or the weight; that requires a *distinct idea*. The point of this example is to bring out the difference between ideas, or rather between ideas and images. (NE 262)

[199] There is a slight unclarity in that explanation: an idea can have a foundation in nature without “conforming” to that foundation, as when it is said that our sensations of color and warmth do not resemble any pattern or archetype. (NE 263)

[200] This is the point I inquired into above, and now it appears that you do not insist there always be conformity with an archetype. According to the opinion (which I do not approve, though) of those who conceive God as having arbitrarily settled what ideas we are to have to indicate the qualities of objects, with no resemblance and not even a natural relationship, our ideas would no more conform to their archetypes than the words which are employed in languages through institution conform to ideas or things themselves. (NE 264)

[201] I regard the perfect/imperfect division as merely a subdivision within distinct ideas; and it does not appear to me that confused ideas such as the idea we have of sweetness (which you spoke of, sir) deserve the name. For although they express the power which produces the sensation, they do not fully express it; or at any rate we cannot know that they do—if we understand the content of our idea of sweetness we could then judge whether the idea suffices to explain everything that experience shows us about sweetness. (NE 267)

[202] I believe that without the desire to make ourselves understood we would indeed have never created language. Once created, however, it also enables man to reason to himself, both because words provide the means for remembering abstract thoughts [*pensées abstraites*] and because of the usefulness of characters and blind thoughts [*pensées sourdes*] in reasoning, since it would take too long to lay everything out and always replace terms by definitions. (NE 275)

[203] I agree; but our idea of the object we speak of is often even more general than this

child's. I have no doubt that a man born blind could speak aptly about colors and make a speech in praise of light, without being acquainted with it, just from having learned about its effects and about the conditions in which it occurs. (NE 287)

[204] To reinforce the distinction between essence and definition, bear in mind that although a thing has only one essence, this can be expressed by several definitions, just as the same structure or the same town can be represented by different drawings in perspective depending on the direction from which it is viewed. (NE 294)

[205] Besides, some predicates are no better known than is the structure of bodies: yellow and bitter, for instance, are objects of simple ideas or imaginings, and nevertheless we have only a confused knowledge of them. (NE 295)

[206] There is not even a rigorous demonstration to prove that the objects of our senses, and of the simple ideas which the senses present us with, are outside us. This point holds especially for people who, like the Cartesians and your famous author, believe that our simple ideas of sensible qualities in no way resemble anything which exists outside us and in objects; for then there would be no compelling reason why these ideas should be founded on any real existence. (NE 296)

[207] In the little paper on ideas which appeared in the *Acta* of Leipzig about twenty years ago, I also remarked that simple terms do not admit of nominal definition; but I also made the point there that terms which are simple only from our point of view because we have no way of analyzing them into the elementary perceptions which make them up—e.g., terms like hot, cold, yellow, green—do admit of real definitions which would explain what causes them. Thus the real definition of *green* is to be composed of a thorough mixture of blue and yellow; though green can no more be given a nominal definition, through which it could be recognized, than can blue or yellow. In contrast with this, if a term is simple in itself—i.e. if we have a clear, distinct conception of it—then it does not admit of any definition, nominal or real. (NE 296–97)

[208] They [i.e. ideas of sensible qualities] only appear to be simple. So when they occur there are other things going on which are connected with them, although the connection is not one that we understand; and these accompanying circumstances provide something that can be explained and subjected to analysis, which gives some hope that eventually we shall be able to discover the reasons for these phenomena. So there is a kind of redundancy in our perceptions of sensible qualities as well as of sensible portions of matter: it consists in the fact that we have more than one notion of a single subject. (NE 299)

[209] As for what is inner: although every outer appearance is grounded in the inner constitution, it can nevertheless happen that two different constitutions result in the same appearance; yet there will be something in common, and that is what philosophers call the 'immediate formal cause'. But even if that were not so, e.g., if M. Mariotte were right (I think he is wrong) in saying that the blue of a rainbow has an entirely different cause from the blue of a turquoise, with no common formal cause; and even if we agreed that some of the apparent natures which lead us to name things had nothing in common internally; our definitions would nevertheless be grounded in real species, for phenomena themselves are realities. (NE 309)

[210] As for your last point, blue and red can hardly provide material for demonstrations through the ideas we have of them, since these ideas are confused. These colors provide material for reasoning only to the extent that we find them through experience to be accompanied by distinct ideas, but without their connection with their accompanying ideas being an apparent one. (NE 371–72)

[211] There are confused ideas where we cannot expect complete knowledge, such as the ideas of some sensible qualities. But with distinct ideas there is reason to hope for everything. (NE 376)

[212] For a start, I grant you, sir, that when people have only confused ideas of *thought* and

of *matter*, which is usually all they do have, it is no wonder that they cannot see how to resolve such questions. Similarly, as I remarked a little while back, if someone has ideas of the angles of a triangle only in the way in which these ideas are commonly had, he will never come upon the discovery that they are always equal to two right angles. (NE 378)

[213] You are correct in predicting, sir, that I will deny that matter can produce pleasure, pain or sensation in us. It is the soul that produces these in itself, in conformity with what happens in matter. . . . Now, given my view, nothing unintelligible happens, except that we cannot sort out everything which has a part in our confused perceptions; they are expressions of the details of what happens in bodies, and even have about them something infinite. As for “the good pleasure of our Maker,” it should be said that he conducts himself in accordance with the natures of things, in such a way that he produces and conserves in them only what is suitable to them and can be explained through their natures; . . . if, finally, God gave things *accidental powers which were not rooted in their natures* and were therefore out of reach of reason in general; that would be a back door through which to re-admit “over-occult qualities” which no mind can understand, along with inexplicable “faculties” (those little goblins), “and whatever the idle School dreamed of” But to attribute their origin to God’s “good pleasure”—that appears hardly worthy of him who is the supreme reason, and with whom everything is orderly, everything is connected. This good pleasure would indeed be neither good nor pleasure if God’s power did not perpetually run parallel to his wisdom. (NE 381–82)

[214] Ideas of sensible qualities are confused; and so they must be produced by powers which are a source only of ideas that have something confused about them. So if we are to know other than through experience how these ideas are linked, it can only be by resolving them into distinct ideas which accompany them, as has been done for instance with the colors of the rainbow and of prisms. This method provides a starting point for analysis. (NE 383)

[215] Yet all this shows that we do have all the distinct ideas that are needed for a knowledge of bodies and spirits, but not sufficiently detailed [knowledge of] particular facts, and that we also lack senses which are sharp enough to sort out the confused ideas and comprehensive

enough to perceive them all. (NE 389)

[216] Phil: With regard to the undiscovered connections between the ideas which we have, I was going to tell you that “the mechanical affections of bodies [have] no affinity at all” with the ideas of colors, sounds, smells, and tastes, or of pleasure and pain; and that their connection depends only on the good pleasure and arbitrary will of God. But I remember that you hold that there is a perfect *correspondence* even though it is not always a complete *resemblance*. You recognize, however, that ideas involve too much minute detail for us to be able to disentangle what is concealed in them; but you still hope that we shall come much closer to doing so. So you would not want anyone to say, as my distinguished author does, that it is “lost labor” to engage in such an inquiry; for fear that that belief might impede the growth of science. (NE 389-90)

[217] When you read the Aristotelian philosophers of bygone days treating of atmospheric phenomena—of the rainbow, for instance—you will find that they believed that one should not even think of distinctly explaining this phenomenon; and the undertakings of Maurolyco, and later of Marco Antonio de Dominis, struck them as being like a flight of Icarus. Yet what has happened since has shown everyone that that was wrong. (NE 390–91)

[218] But the ideas of sensible qualities such as color, flavor etc. (which *ne sont que des fantômes*) do come to us through the senses, i.e. from our confused perceptions. (NE 392)

[219] As I have more than once said, that is because those ideas whose compatibility or connection cannot be judged by reason are confused ones, such as those of particular sensory qualities. (NE 393)

[220] So again you are assuming that these sensible qualities, or rather our ideas of them, do not depend naturally on shapes or motion, but only on the good pleasure of God who gives us these ideas. You thus appear to have forgotten, sir, my repeated objections to this view, in which I have tried to convince you that these “sensory ideas” depend on detail

in the shapes and motions, which they precisely express, though the mechanical processes which act on our senses are too small and too great in number for us to sort out this detail within the confusion. But if we had arrived at the inner constitutions of certain bodies, these qualities would be traced back to their intelligible causes and we should see under what circumstances they were bound to be present; even though it would never be in our power to recognize their causes sensorily, in our sensory ideas which are the confused effects of bodies acting on us. For instance, we now have a complete analysis of green into blue and yellow, and almost all our remaining questions about it concern these ingredients; yet we are totally incapable of disentangling the ideas of blue and yellow within our sensory idea of green, simply because it is a confused idea. Somewhat similarly, when the swift rotation of a cog-wheel makes us perceive an artificial transparency, as I have noticed on visits to clock-makers, we are not able to disentangle the idea of the cause of this, i.e. the idea of the teeth on the wheel. The wheel's rotation makes the teeth disappear and an imaginary continuous transparent [ring] appear in their place; it is made up of successive appearances of teeth and of gaps between them, but in such rapid succession that our imagination (*phantaisie*) cannot distinguish them. So the teeth are encountered in the distinct notion of this transparency, but not in that confused sensory perception of it. It is the latter's nature to be confused and to remain so; for if the confusion ceased (e.g., if the motion slowed down enough for us to be able to observe the parts in succession) it would no longer be this same perception, i.e. it would no longer be this image [*phantome*] of transparency. Now, there is no need to suppose that God bestows this image [*phantome*] upon us through his good pleasure, and that it is independent of the motion of the teeth on the wheel and of the gaps between them. On the contrary, we grasp that it is only a confused expression of what is occurring in this motion—an expression, I say, which consists in the confounding of successive things into an apparent simultaneity. And so we can readily conclude that the situation will be the same with regard to those other sensory images [*phantomes*], like colors and tastes and so on, of which we do not yet have such a perfect analysis. (For the truth is that these ought to be called 'images' [*phantomes*] rather than 'qualities' or even 'ideas'.) It would be enough for all our purposes if we understood them as well as we do that artificial transparency: it would be neither reasonable nor possible to profess to know more; for to wish that these confused

images [*phantomes*] remain and that we nevertheless disentangle the ingredients by the same imagination [*phantaisie*] is self-contradictory. It is wanting to be deceived by some charming perspective and wanting to see through the deception at the same time—which would spoil the effect. (NE 403–04)

[221] Euclid, for instance, has included in his axioms what amounts to the statement that two straight lines can meet only once. Imagination, drawing on sense-experience, does not allow us to depict two straight lines meeting more than once, but this is not the right foundation for a science. And if anyone believes that his imagination presents him with connections between distinct ideas, then he is inadequately informed as to the source of truths, and would count as immediate a great many propositions which really are demonstrable from prior ones. This is something which has not been properly thought out by many people who have found fault with Euclid: images of this sort are merely confused ideas, and someone who knows a straight line only by means of them will be incapable of demonstrating anything about it. Euclid had no distinctly expressed idea of a straight line, i.e. no definition of it (for the one he offers provisionally is unclear, and useless to him in his demonstrations), and so he was obliged to have recourse to two axioms which served him in place of a definition and which he uses in his demonstrations It is likely, too, that by allowing our senses and their images to guide us we would be led into errors; we see something of the sort in the fact that people who have not been taught strict geometry believe, on the authority of their imaginations, that it is beyond doubt that two lines which continually approach each other must eventually meet. . . . But apart from that, we would be deprived of what I value most in geometry, considered as a contemplative study, namely its letting us glimpse the true source of eternal truths and of the way in which we can come to grasp their necessity, which is something that the confused ideas of sensory images can never distinctly reveal. You will tell me that Euclid was nevertheless obliged to rest content with certain axioms whose evidence can be seen only confusedly, by means of images. I admit that he contented himself with those axioms. (NE 451–52)

[222] I am not convinced that ideas—*distinct* ideas, that is—are as lacking to us as you

believe. As for confused ideas or rather images—or “impressions” if you prefer—such as colors, tastes and so on, resulting from various minute ideas which are distinct in themselves though we are not distinctly aware of them: we lack an infinity of these which befit other creatures more than they do ourselves. But the role of these impressions is to provide us with natural inclinations, and to provide a grounding for observations of experience, rather than to furnish materials for reasoning—except insofar as distinct perceptions come with them. So what holds us back is primarily the inadequacy of our knowledge of these distinct ideas concealed within the confused ones; and even when everything is revealed distinctly to our senses or our minds, the multiplicity of things which must be taken into account sometimes confuses us. For instance, if we had a thousand cannon-balls heaped up in front of us, and wanted to take in the number and the [mathematical] properties of this assemblage, it would obviously be a great help to arrange them in patterns, as they do in arsenals, so as to have distinct ideas of them and to fix them in our minds so that we need not trouble to count them more than once. . . . This difficulty shows that even the clearest and most distinct ideas do not always- yield us all that we seek for and all that could be derived from them. (NE 487–88)

Unpublished comments on Bayle, 170?

[223] But I do not grant that the soul of beasts is spiritual, or that it deserves to be called a Spirit, for although it has sensation [*sentiment*], it does not have understanding, which contains [*renferme*] the knowledge of reasons. And it is for this reason also that beasts have no freedom. (G IV 527)

Unpublished comments on Bayle’s Note H, 1705?

[224] I, however, have explained how this agreement happens naturally, by supposing that each soul is a living mirror representing the universe from its point of view, and above all with respect to its body. Thus the causes which move the stick (that is, the man stationed behind the dog, getting ready to hit it while it eats, and everything in the history of the material world which contributes to his being in that position), are also represented in the dog’s soul from the outset, exactly and truly, but feebly, by small and confused perceptions and without apperception, that is, without the dog’s knowing it—because the dog’s body

also is affected by them only imperceptibly. And just as in the history of the material world these dispositions eventually produce the blow firmly on the dog's body, so similarly the representations of these dispositions in the dog's soul eventually produce the representation of the blow of the stick; and since that representation is distinguished and strong (which the representations of the predispositions were not, since the predispositions affected the dog's body only feebly), the dog apperceives it very distinctly, and this is what constitutes its pain. (NS 77–78)

[225] The representation of the present state of the universe in the dog's soul produces in it the representation of the subsequent state of the same universe, just as in the things represented the preceding state actually produces the subsequent state of the world. *In a soul, the representations of causes are the causes of the representations of effects.* (NS 78)

Unpublished comments on Bayle's Note L, 1705?

[226] M. . . . Although humans can reason about abstract things which go beyond the imagination, there are still signs in the imagination which correspond to these things, such as letters and symbols. There is no act of understanding so pure as not to be accompanied by some imagination. So there is always something mechanical in the body which exactly corresponds to the train of thoughts in a person's mind, insofar as they involve imagination. (NS 100)

[227] Q. . . . It is better to say that God put into each soul 'the world in concentrated form', or gave it the power to represent the universe according to the point of view appropriate to that soul. It is this which is the source of its actions, and which distinguishes them one from another and from the actions of another soul. For it follows that they will undergo changes which represent the universe's changes, and that other souls will have other, but corresponding, changes. (NS 100)

[228] R. . . . It is completely different with a soul or a mind. Because this is a true substance, or a complete being, and the source of its own actions, it, so to speak, remembers (confus-

edly, of course) all its preceding states, and is affected by them... the soul, even though it has no parts, has within it, because of the multitude of representations of external things, or rather because of the representation of the universe lodged within it by the creator, a great number, or rather an infinite number, of variations. (NS 101)

[229] V.... But thought involves an actual external material object, the human body; and this is a composite object which contains a very large number of modifications, through which it is connected with surrounding bodies and, by means of them, step by step with all others. And the soul's tendencies towards new thoughts correspond to the body's tendency towards new shapes and new movements. And as these new movements can make the object pass from order to disorder, their representation in the soul can also make the soul pass from pleasure to displeasure. (NS 102)

[230] W.... If Caesar's soul had only distinguished [*distinguées*] thoughts, and produced them all voluntarily, the change from one thought to another could be as M. Bayle suggests, for example from the thought of one tree to that of another. But besides the perceptions which the soul remembers, it has heaps [consisting] of an infinity of confused ones which it does not disentangle, and it is through these that it represents bodies that are outside of it, and comes to have distinct thoughts which are unlike the preceding ones, because the bodies which the soul represents have changed all at once to something which strongly affects its own. So the soul sometimes passes from white to black or from yes to no, without knowing how, or at least involuntarily. For what its confused thoughts and its sentiments produce in it is attributed to bodies. So we should not be surprised if a man who is eating jam and is bitten by some animal passes immediately from pleasure to pain despite himself. For the animal was already affecting the man's body, in the approach prior to the bite, and the representation of this was already affecting his soul, though insensibly. However, little by little the insensible becomes the sensible in the soul as in the body; it is thus that the soul changes itself even against its will, for it is enslaved by its sentiments and confused thoughts which occur according to the states of its body, and of other bodies through their relation to it.... Thus we must not say that nothing new happens in the substance of this soul which

gives rise to a sentiment of the bite; those are confused presentiments or, better, insensible dispositions of the soul, which represent the dispositions of the body with regard to the bite. (NS 102–3)

[231] X. . . . But we have no need for the soul's substance to be composite; it suffices that its thoughts are composite and envelop a large number of objects and modifications distinctly or confusedly known, as experience in effect shows us. For even though the soul is a simple and unique substance, it never has simple and unique perceptions. It always has, all at the same time, several distinct ones which it can remember, and attached to them an infinity of confused ones the ingredients of which it cannot distinguish [*et une infinité de confuses qui y sont attachées dont elle ne sauroit distinguer les ingrediens*]. (NS 103)

[232] AA. . . . But the soul cannot apperceive this, for it is enveloped in the confused perceptions of the soul, which express all the detail of the universe. And it can apperceive it distinctly only when its organs are noticeably struck by the notes of this score. (NS 104–5; G IV 550)

[233] BB. I have already shown more than once that the soul does many things without knowing how it does them—when it does them by means of confused perceptions and unconscious inclinations or appetitions, of which there are always an extremely large number, so that it is impossible for the soul to apperceive them, or to disentangle them distinctly. Our perceptions are never perfectly uniform, as a straight line is; they are always clothed in something sensible, which involves something confused, even though it is itself clear. It is in this way that notions of colors are clear, and are easily noticed. But they are confused, for their composition is not manifest in the *sentiment* we have of them. They involve in themselves something of the light source which generates them, of the object from which they come, and of the medium through which they pass. And they are bound to be affected by all that, and as a consequence by an infinity of things which have an effect on the medium they pass through, just as water is always affected a little by its channel. I have shown elsewhere that the confused perception of pleasantness or unpleasantness which we find in consonances

or dissonances consists in an occult arithmetic. The soul counts the beats of the vibrating object which makes the sound, and when these beats regularly coincide at short intervals, it finds them pleasant. Thus it counts without knowing it. And it is also in this way that it performs an infinity of other small operations which are very precise, although they are not at all voluntary, and are known only by the noticeable effect in which they eventually culminate. They give us a sensation [*sentiment*] that is clear but confused, because its sources are not apperceived. Reasoning has to come to our aid—as in music, where the proportions which produce an agreeable sound have been discovered. (NS 105)

[234] EE. . . . In short, the sum of my system comes to this: each monad is a concentration of the universe, and each mind an imitation of the divinity. In God the universe is not only concentrated, but perfectly expressed; but in each created monad there is distinctly expressed only one part, which is larger or smaller according as the soul is more or less excellent, and all the infinite remainder is expressed only confusedly. . . . In fact when we say that each monad, soul, or mind has received a specific law, we must add that this is only a variation of the general law which orders the universe; it is like the way in which the same town appears different from the different points of view from which it is seen. . . . The marvel is that the sovereign wisdom has found in representing substances a way to vary the same world at the same time to an infinite degree, for since the world already contains in itself an infinite variety, and has that variety diversely expressed by an infinity of different representations, it possesses an infinity of infinities, and could not be more appropriate to the nature and intentions of its inexpressible author, who exceeds in perfection everything that can be thought. (NS 106–7)

Leibniz to Wolff, February 1705

[235] We cannot give a nominal definition of pleasure, and pleasantness is not the mark of pleasure; nevertheless, pleasure can be given a real definition: I consider it to be nothing other than the sensation of perfection. The same is true of other clear but confused ideas; thus the color green can be given a definition—not a nominal one, to be sure, but still a real, causal one—insofar as it is obviously a composite of blue and yellow. (LW 18)

Leibniz to Wolff, 20 August 1705

[236] I hold that in our confused thoughts there are many things of which we are not conscious, since a confused thought consists of innumerable small perceptions, which, on account of their vast number, it is not possible to distinguish, even if we are aware of their result. (LW 32)

Remarks on the Opinion of Malebranche that We See All Things in God, 1706

[237] One might answer that we see things confusedly when we see too many of them at a time. (Wiener 500 = G VI 575)

Leibniz to Sophie Charlotte, 6 February 1706

[238] Her Majesty asks me what a simple substance is. I respond that its nature is to have perception and consequently to represent composite things. She asks how the composite can be represented in the simple, or the multitude in the unity? I respond that it is somewhat like an infinity of concurrent rays that form angles in the center, all of which are simple and indivisible. And these rays do not consist only in the lines, but also in tendencies or efforts in accordance with the lines, which intersect without being confounded, much as the movement of fluids allows us to understand. It is thus that if we throw several stones in some still water at the same time, we see that each makes circles on the surface of the water, which intersect one another and do not become confounded, each line of circles advancing as if it were all alone. We also see that the rays of light penetrate without mixing. Finally, we know that a single body can receive an infinity of impressions all at once, each of which has its effect; and that the least part of a mass, pressed and full of efforts, resists the efforts of all the others, something which cannot happen apart from it receiving the impression. This forces us to conclude that these same Unities, from which all the rest results, must be modified in relation to everything in the environment; and this constitutes the representation we attribute to them. (G VII 566)

[239] Each soul is a world in miniature, representing external things according to its point

of view, and confusedly or distinctly according to the organs that accompany it, in contrast to God who contains everything distinctly and eminently. (G VII 566–67)

[240] From all this it also seems to follow that each soul, being a mirror of the universe, must progress [*aller son train*] in the same way as the very universe that it represents, without this rule of progression of the soul ever being completely interrupted by death, which is only a sleep, that is to say, a state where the perceptions are more confused, and which lasts until they redevelop. (G VII 568)

[241] And since there are two kinds of perception, the simple ones and those which are accompanied by reflections which give rise to the sciences and to reason, there are the same two kinds of souls, namely the common souls in which perception is without reflection, and the rational souls that think about what they do: the former are only mirrors of the universe, but the latter are also imitations of the divinity. (G VII 568)

Leibniz to Burnett, 26 May 1706 (per Gerhardt)

[242] I hold also that the soul is never without perceptions, but it is often without *apperception*, for it apperceives only distinguished perceptions [*perceptions distinguées*] which it can lack in sleep, in apoplexy, etc. (G III 307)

Leibniz to Des Bosses, 11 July 1706

[243] [P]erception is nothing other than the expression of many things [*multorum*] in one. (G II 311)

Leibniz to Des Bosses, 1 September 1706

[244] Ad 23. I strongly disapprove of the Cartesians insofar as they hold that there is only an arbitrary connection between objects and our sensations of them, and that in God there is the freedom to make odors be represented by those perceptions currently representing colors, as if God does not have a reason for everything he does, or as if circles are represented by triangles under normal circumstances. (G II 314)

Leibniz to Coste, 19? December 1707

[245] God or a perfectly wise person will always choose the best that they know of, and if one side were not better than the other, they would choose neither the one nor the other. The passions often take the place of reason in other intelligent substances, and we can always assert, with respect to the will in general, that *choice follows from the greatest inclination* (by which I understand both passions and reasons, true or apparent).

However, I see that there are people who imagine that sometimes we set ourselves for the lesser option, that God sometimes chooses the lesser good, everything considered, and that a person sometimes chooses without grounds and against all his reasons, dispositions, and passions, and finally, that we sometimes choose without any reason determining the choice. But I hold that to be false and absurd, because one of the greatest principles of good sense is that nothing ever happens without a cause or determining reason. Thus when God chooses, it is by reason of the best, and when a person chooses, it is the option that struck him the most. If he chooses what he sees as less useful and pleasant in some respects, perhaps its becomes more agreeable to him through a whim, or contrariness, or for similar reasons which belong to a depraved taste; these are determining reasons, even though they are not conclusive reasons. And we will never be able to find a contrary example. (AG 194)

[246] ... what is attributed to the impressions of external things comes only from confused perceptions in us which correspond to them, and which cannot but be given us at the start in virtue of the pre-established harmony which establishes the connection of each substance with all others. (Wiener 484; also AG 195)

Refutation of Spinoza, c. 1708

[247] Individuals cannot be distinctly conceived. (Wiener 486 = AG 273)

[248] But it is completely alien to every sort of reason that a soul should be an idea. Ideas are purely abstract things, like numbers and shapes, and cannot act. Ideas are abstract and universal: the idea of any animal is a possibility, and it is a mockery to call souls immortal

because ideas are eternal, as if the soul of a globe is to be called eternal because the idea of a spherical body is eternal. The soul is not an idea, but the source of innumerable ideas. For, over and above a present idea, the soul has something active, that is, the production of new ideas. But, according to Spinoza, at any given moment, a soul will be different, since, when the body changes, the idea of the body is different. Hence, we shouldn't be surprised if he takes creatures for vanishing modifications. Therefore, the soul is something vital, that is, something that contains active force. (AG 277)

[249] However, it is true that there are certain things in the soul that can only be explained in an adequate way through external things, and to that extent the soul depends upon external things; this happens not through a physical influx, but, so to speak, through a moral influx, insofar as, in creating the mind, God took things other than the mind itself into consideration to a greater extent. For, in creating and conserving each and every thing, God takes all other things into consideration. (AG 279)

Remarks on the Opinion of Malebranche that We See All Things in God . . . , 1708

[250] One might answer that we see things confusedly when we see too many of them at a time. (Wiener 500)

[251] The Father [Malebranche] having said that ideas are representative beings, Mr. Locke asks (§26) whether these beings are substances, modes or relations. I believe it may be said that they are nothing but relations resulting from the attitudes of God. (Wiener 500)

[252] But I think that the Father understands by *sentiment* a perception of the imagination, whereas there may be ideas of things which are not sensible nor imaginable. I affirm that we have as clear an idea of the color of the violet as of its figure (as is objected here) but not as distinct nor as intelligible. (Wiener 502; G VI 577)

[253] [T]he objects, the representation of which God causes us to have, have something

which resembles the idea we have of substance, and it is this which makes us judge that there are other substances. (Wiener 502)

Theodicy, 1710

[254] Mysteries may be explained sufficiently to justify belief in them; but one cannot comprehend them, nor give understanding of how they come to pass. Thus even in natural philosophy we explain up to a certain point sundry sensible qualities, but in an imperfect manner, for we do not comprehend them. (Preliminary Discourse, §5)

[255] Incomprehensibility does not prevent us from believing even natural truths. For instance (as I have already pointed out) we do not comprehend the nature of odors and flavors, and yet we are persuaded, by a kind of faith which we owe to the evidence of the senses, that these sensible qualities are founded upon the nature of things and that they are not illusions. (Preliminary Discourse, §41)

[256] M. Bayle makes one more ingenious objection, which he draws from the example of the sense of sight. “When a square tower,” he says, “from a distance appears to us round, our eyes testify very clearly not only that they perceive nothing square in this tower, but also that they discover there a round shape, incompatible with the square shape. One may therefore say that the truth which is the square shape is not only above, but even against, the witness of our feeble sight.” It must be admitted that this observation is correct, and although it be true that the appearance of roundness comes from the effacement of the angles, which distance causes to disappear, it is true, notwithstanding, that the round and the square are opposites. Therefore my answer to this objection is that the representation of the senses, even when they do all that in them lies, is often contrary to the truth; but it is not the same with the faculty of reasoning, when it does its duty, since a strictly reasoned argument is nothing but a linking together of truths. And as for the sense of sight in particular, it is well to consider that there are yet other false appearances which come not from the “feebleness of our eyes” nor from the loss of visibility brought about by distance, but from the very *nature of vision*, however perfect it be. It is thus, for instance, that the circle

seen sideways is changed into that kind of oval which among geometricians is known as an ellipse, and sometimes even into a parabola or a hyperbola, or actually into a straight line, witness the ring of Saturn. (Preliminary Discourse, §64)

[257] The *external* senses, properly speaking, do not deceive us. It is our inner sense which often makes us go too fast. That occurs also in brute beasts, as when a dog barks at his reflection in the mirror: for beasts have *consecutions* of perception which resemble reasoning, and which occur also in the inner sense of men, when their actions have only an empirical quality. But beasts do nothing which compels us to believe that they have what deserves to be properly called a *reasoning* sense, as I have shown elsewhere. Now when the understanding uses and follows the false decision of the inner sense (as when the famous Galileo thought that Saturn had two handles) it is deceived by the judgment it makes upon the effect of appearances, and it infers from them more than they imply. For the appearances of the senses do not promise us absolutely the truth of things, any more than dreams do. It is we who deceive ourselves by the use we make of them, that is, by our consecutions. Indeed we allow ourselves to be deluded by probable arguments, and we are inclined to think that phenomena such as we have found linked together often are so always. Thus, as it happens usually that that which appears without angles has none, we readily believe it to be always thus. Such an error is pardonable, and sometimes inevitable, when it is necessary to act promptly and choose that which appearances recommend; but when we have the leisure and the time to collect our thoughts, we are in fault if we take for certain that which is not so. It is therefore true that appearances are often contrary to truth, but our reasoning never is when it proceeds strictly in accordance with the rules of the art of reasoning. If by reason one meant generally the faculty of reasoning whether well or ill, I confess that it might deceive us, and does indeed deceive us, and the appearances of our understanding are often as deceptive as those of the senses: but here it is a question of the linking together of truths and of objections in due form, and in this sense it is impossible for reason to deceive us. (Preliminary Discourse, §65)

[258] Evil is therefore like darkness, and not only ignorance but also error and malice consist

formally in a certain kind of privation. Here is an example of error which we have already employed. I see a tower which appears round at a distance, although it is square. The thought that the tower is what it seems flows naturally from what I see; and when I pay attention to this thought, it is an affirmation, a false judgment: but if I pursue the examination, if some reflection leads me to apperceive that the appearances deceive me, then I abandon the error. To remain in a certain place, or not go further, or not recognize some mark—these are privations. (§32 = G VI 121–22)

[259] Aristotle had already observed that there are two things in freedom, namely, spontaneity and choice, and therein lies our mastery over our actions. . . . There is contingency in a thousand actions of Nature; but when there is no judgment in him who acts there is no *freedom*. And if we had judgment not accompanied by any inclination to act, our soul would be an understanding [*entendement*] without will. (§34)

[260] Besides, we do not always follow the latest judgment of the practical understanding when we resolve to will; but we always follow, in our willing, the result of all the inclinations that come from the direction both of reasons and passions, and this often happens without an express judgment of the understanding. (§51)

[261] Moreover, since everything that happens in the soul depends only on it, according to this system, and its next state derives only from it and from its present state, how can we give it a greater *independence*? It is true that there still remains some imperfection in the constitution of the soul. All that happens to the soul depends on it, but does not always depend on its will—;hat would be too much—and is not even always known by its understanding or perceived [*apperçu*: perceived, noticed] distinctly. For there is in it not only an order of distinct perceptions, which constitutes its dominion [*empire*]; but also a series of confused perceptions or passions, which constitutes its bondage [*esclavage*]. And this should not surprise us; ;he soul would be a divinity if it had only distinct perceptions. It has nevertheless some power over these confused perceptions also, even if in an indirect manner. For although it cannot change its passions forthwith, it can work from afar towards that end with

enough success, and endue itself with new passions and even habits. It even has a like power over the more distinct perceptions, being able to endue itself indirectly with opinions and intentions, and to hinder itself from having this one or that, and stay or hasten its judgment. For we can seek means beforehand to arrest ourselves, when occasion arises, on the sliding step of a rash judgment; we can find some incident to justify postponement of our resolution even at the moment when the matter appears ready to be judged. Although our opinion and our act of willing be not directly objects of our will (as I have already observed), one sometimes takes measures nevertheless to will and even to believe in due time, that which one does not will, or believe, now. So great is the profundity of the spirit of man. (§64 = G VI 137–38)

[262] And now, to bring to a conclusion this question of *spontaneity*, it must be said that, on a rigorous definition, the soul has within it the principle of all its actions, and even of all its passions, and that the same is true in all the simple substances scattered throughout nature, although there be freedom only in those that are intelligent [*intelligentes*]. In the popular sense notwithstanding, speaking in accordance with appearances, we must say that the soul depends in some way upon the body and upon the impressions of the senses: much as we speak with Ptolemy and Tycho in everyday conversation, and think with Copernicus, when it is a question of the rising and the setting of the sun. (§65)

[263] For insofar as the soul has perfection and distinct thoughts, God has accommodated the body to the soul, and has arranged beforehand that the body is impelled to execute its orders. And insofar as the soul is imperfect and as its perceptions are confused, God has accommodated the soul to the body, in such sort that the soul is swayed by the passions arising out of corporeal representations. This produces the same effect and the same appearance as if the one depended immediately upon the other, and by the agency of a physical influence. Properly speaking, it is by its confused thoughts that the soul represents the bodies which encompass it. The same thing must apply to all that we understand by the actions of simple substances one upon another. For each one is assumed to act upon the other in proportion to its perfection, although this be only ideally, and in the reasons of things, as God in the beginning ordered one substance to accord with another in proportion to the perfection or

imperfection that there is in each. (Withal action and passion are always reciprocal in creatures, because one part of the reasons which serve to explain clearly [*distinctement*] what is done, and which have served to bring it into existence, is in the one of these substances, and another part of these reasons is in the other, perfections and imperfections being always mingled and shared.) Thus it is we attribute *action* to the one, and *passion* to the other. (§66)

[264] What would an intelligent creature do if there were no unintelligent things? What would it think of, if there were neither movement, nor matter, nor sense? If it had only distinct [*distinctes*] thoughts it would be a God, its wisdom would be without bounds: that is one of the results of my meditations. As soon as there is a mixture of confused [*confuses*] thoughts, there is sense, there is matter. For these confused [*confuses*] thoughts come from the relation of all things one to the other by way of duration and extent. Thus it is in my philosophy there is no rational creature without some organic body, and there is no created spirit entirely detached from matter. But these organic bodies vary no less in perfection than the spirits to which they belong. (§124)

[265] I have shown that freedom, in the sense required by the Theological Schools, consists in *intelligence* [*l'intelligence*], which involves a distinct knowledge of the object of deliberation, in *spontaneity*, by which we determine ourselves, and in *contingence*, that is, in the exclusion of logical or metaphysical necessity. Intelligence [*l'intelligence*] is like the soul of freedom, and the rest is like the body and the foundation. The free substance determines itself, by itself, according to the pattern of good perceived by the understanding [*l'entendement*], which inclines without necessitating: and all the conditions of freedom are comprised in these few words. It is well nevertheless to point out that the imperfection we find in our knowledge and our spontaneity, and the infallible determination that is involved in our contingency, destroy neither freedom nor contingence. (§288)

[266] Our knowledge is of two kinds, distinct or confused. Distinct knowledge, or *intelligence* [*l'intelligence*], occurs in the actual use of reason; but the senses supply us with confused

thoughts. And we may say that we are immune from bondage insofar as we act with a distinct knowledge, but that we are the slaves of passion insofar as our perceptions are confused. . . . That which in a slave is effected by bonds and constraint in us is effected by passions, whose violence is sweet, but nonetheless pernicious. In truth we will only that which pleases us: but unhappily what pleases us now is often a real evil, which would displease us if we had the eyes of the understanding open. Nevertheless that evil state of the slave, which is also our own, does not prevent us, any more than him, from making a free choice of that which pleases us most, in the state to which we are reduced, in proportion to our present strength and knowledge. (§289)

[267] For better understanding of this point, one must know that true spontaneity is common to us and all simple substances, and that in the intelligent [*intelligente*] or free substance this becomes a mastery over its actions. That cannot be better explained than by the System of Pre-established Harmony, which I indeed propounded some years ago. There I pointed out that by nature every simple substance has perception, and that its individuality consists in the perpetual law which brings about the sequence of perceptions that are assigned to it, springing naturally from one another, to represent the body that is allotted to it, and through its instrumentality the entire universe, in accordance with the point of view proper to this simple substance and without its needing to receive any physical influence from the body. (§291)

[268] The spontaneity of our actions can therefore no longer be questioned; and Aristotle has defined it well saying that an action is *spontaneous* when its source is in him who acts. . . . And it is also in this that we have a particular and even sensible influence over our actions and our willings, but this influence results from spontaneity joined to intelligence [*l'intelligence*]. (§301; cf. §296, Origin of Evil, §20)

[269] Up to this point, I have expounded the two conditions of freedom mentioned by Aristotle, that is, *spontaneity* and *intelligence* [*l'intelligence*], which are found united in us in deliberation, whereas beasts lack the second condition. (§302)

[270] A very clear knowledge of the best determines the will; but it does not necessitate it, properly speaking. We must always distinguish between the necessary and the certain or infallible, as I have already remarked more than once, and distinguish metaphysical necessity from moral necessity. I believe also that it is only the will of God that follows always the judgment of the understanding; all intelligent creatures are subject to some passions, or to perceptions at least that do not consist entirely in what I call *adequate* ideas. And although these passions always tend toward the true good in the blessed, in virtue of the laws of nature and the system of things pre-established in relation to them, yet this does not always happen in such a way that they have a perfect knowledge [of that good]. It is the same with them as with us, who do not always understand the reason for our instincts. Angels and the blessed are creatures as much as us, in whom there is always some confused perception mixed with distinct knowledge. . . . As for us, besides the judgment of the understanding, of which we have an express knowledge, there are mixed therewith confused perceptions of the senses, and these give rise to passions and even imperceptible inclinations, which we do not always perceive. These movements often thwart the judgment of the practical understanding. (§310)

[271] This error [the denial of the Principle of Sufficient Reason] has much impaired M. Bayle's arguments, and has barred his way of escape from many perplexities. That appears again in relation to the laws of the realm of nature: he believes them to be arbitrary and indifferent, and he objects that God could better have attained his end in the realm of grace if he had not clung to these laws, if he had more often dispensed with their observance, or even if he had made others. He believed this especially with regard to the law of the union between the soul and the body. For he is persuaded, with the modern Cartesians, that the ideas of the sensible qualities that God gives (according to them) to the soul, occasioned by movements of the body, have nothing representing these movements or resembling them. Accordingly it was a purely arbitrary act on God's part to give us the ideas of heat, cold, light and other qualities which we experience, rather than to give us quite different ideas occasioned in the same way. I have often wondered that people so talented should have been capable of relishing notions so unphilosophic and so contrary to the fundamental maxims

of reason. For nothing gives clearer indication of the imperfection of a philosophy than the necessity experienced by the philosopher to confess that something comes to pass, in accordance with his system, for which there is no reason. (§340)

[272] The representation has a natural relation to that which is to be represented. If God should have represented the round shape of a body by the idea of a square, that would be an unsuitable representation: for there would be angles or projections in the representation, while all would be equal and uniform in the original. The representation often suppresses something in the objects when it is imperfect; but it can add nothing: that would render it, not more than perfect, but false. Moreover, the suppression is never complete in our perceptions, and there is in the representation, confused as it is, more than we see there. Thus there is reason for supposing that the ideas of heat, cold, colors, etc., also only represent the small movements carried out in the organs, when one senses these qualities, although the multiplicity and smallness of these movements prevents distinct [*distincte*] representation. Almost in the same way it happens that we do not discern the blue and the yellow which play their part in the representation as well as in the composition of the green, when the microscope shows that what appears to be green is composed of yellow and blue parts. (§356 = G VI 327–28)

[273] It is true that the same thing may be represented in different ways; but there must always be an exact relation between the representation and the thing, and consequently between the different representations of one and the same thing. The projections in perspective of the conic sections of the circle show that one and the same circle may be represented by an ellipse, a parabola and a hyperbola, and even by another circle, a straight line and a point. Nothing appears so different nor so dissimilar as these figures; and yet there is an exact relation between each point and every other point. Thus one must allow that each soul represents the universe to itself according to its point of view, and through a relation which is peculiar to it; but a perfect harmony always subsists therein. (§357)

[274] What is more, I have proved conclusively that God sees in each portion of the universe

the whole universe, owing to the perfect connection of things. He is infinitely more discerning than Pythagoras, who judged the height of Hercules by the size of his footprint. (§360)

[275] The operation of spiritual automata, that is of souls, is not mechanical, but it contains in the highest degree all that is beautiful in mechanism. The movements which are developed in bodies are concentrated in the soul by representation as in an ideal world, which expresses the laws of the actual world and their consequences, but with this difference from the perfect ideal world which is in God, that most of the perceptions in the other substances are only confused. For it is plain that every simple substance envelops the whole universe through its confused perceptions or sensations [*sentimens*], and that the succession of these perceptions is regulated by the particular nature of this substance, but in a manner which always expresses all the nature in the universe; and every present perception leads to a new perception, just as every movement that it represents leads to another movement. But it is impossible that the soul can know distinctly [*distinctement**] its whole nature, and apperceive how that innumerable number of small perceptions, crammed or rather concentrated together, shapes itself there: to that end it would have to know perfectly the whole universe which is enveloped there, that is, it would have to be a God. (§403 = G VI 356–57)

Summary of the Controversy, Reduced to Formal Arguments

[276] So the predetermination of events by their causes is precisely what contributes to morality instead of destroying it, and the causes incline the will without necessitating it. For this reason the determination we are concerned with is not a necessitation. It is certain (to him who knows all) that the effect will follow this inclination; but this effect does not follow thence by a consequence that is necessary, that is, the contrary of which implies contradiction; and it is also by such an inward inclination that the will is determined, without the presence of necessity. Suppose that one has the greatest possible passion (for example, a great thirst), you will admit that the soul can find some reason for resisting it, even if it were only that of displaying its power. Thus though one may never have complete indifference of equipoise, and there is always a predominance of inclination for the course adopted, that predominance does not render absolutely necessary the resolution taken. (Huggard 382)

[277] Rather it is true freedom, and the most perfect, to be able to make the best use of one's free will, and always to exercise this power, without being turned aside either by outward force or by inward passions, whereof the one enslaves our bodies and the other our souls. There is nothing less servile and more befitting the highest degree of freedom than to be always led towards the good, and always by one's own inclination, without any constraint and without any displeasure. (Huggard 386)

Leibniz to Wagner, 4 June 1710

[278] Broadly speaking, soul will be the same as life or vital principle, that is, the principle of internal action existing in the simple thing or monad, to which external action corresponds. And this correspondence of internal and external, or representation of the external in the internal, of the composite in the simple, of multiplicity in unity, constitutes in reality perception. (Wiener 504–5)

[279] I have shown, moreover, by examples and arguments, that not all perception is sensation, but that there is also insensible perception. For example, I could not perceive green unless I perceived blue and yellow, from which it results. At the same time, I do not sense blue and yellow, unless perchance a microscope is employed. (Wiener 505)

[280] We see, indeed, that a man awaking from a profound sleep, or even recovering from apoplexy, is wont to recover the memory of his former state. The same must be said of death, which can render our perceptions turbid [*turbatas*] and confused [*confusas*] but cannot entirely blot them from memory, the use of which returning, rewards and punishments take place. (Wiener 508 = G VII 531)

Leibniz to Hartsoeker, 30 October 1710

[281] Nevertheless I do not deny that the soul of these organic bodies which are formed, senses, represents exactly and animates all that it does according to its appetites, so that one can even say that it is plastic. But all this is only through confused *sentiments* and appetites:

these perceptions are without understanding [*intelligence*], and these appetites are without freedom in this encounter, and they are too small and too great in number for us to be able to apperceive or to see them distinctly. Nevertheless in virtue of the preestablished harmony, the motions in the bodies correspond to the appetites of the soul, the one executing what the other desires, and the one sensing what the other does. (GP III 508)

[282] (18) I am of the opinion that there is no parcel of matter where there are no souls or perception; but at the same time I believe that there are always organic bodies that correspond to these souls, as I have already remarked above. But often their sensations [*sentimens*] are confused, as when we sleep without having dreams which we can remember. It is true that there is no soul that sleeps forever. (G III 509)

[283] (22) Regarding the preestablished harmony between the modifications of the soul and those of the body, and the execution of our appetites by the organs, it happens that the appetites and consequently the perceptions to which they give rise fit to a perfect detail all that happens in the organs, so that these appetites are executed, something which would be apparent if it were possible for us to analyze our confused perceptions. And otherwise without this detail, the appetite would not be perfect and entirely of this object, but only something approaching it. And as our understanding and consequently our will is not capable of this detail, our simple will (if the appetite goes to the end without having to go to middles and middles of middles) is not an appetite that our body is obliged to follow and execute; it is only so obliged in the interior voluntary movements, not prevented, where the confused appetite seconds [*seconde?*] the will or the distinct appetite by a perfect detail, the organs being made specially for this. However our interior involuntary movements do not fail to fit our confused and insensible appetites, but these movements depend as little on the influence of the will as these appetites depend on our understanding, so that the will does not always suffice to make that body act according to its desire, when the exact perception of the means is not joined there. Outside of its body the soul succeeds only by a good and distinct conception of means, or else by chance; and in its own body it succeeds only by a perception of the means that is at least confused, which happens in what we call voluntary

movement. In this way ends and means are always joined together in the soul, as causes and effects are joined together in the body, so that the desired effect must be executed. (G III 509–10)

Leibniz to Des Bosses, 7 November 1710

[284] No creature, however excellent, can at once distinctly perceive or comprehend the infinite; on the contrary, indeed, whoever were to understand a single part of matter would understand the whole universe, by virtue of this same interconnection of which I spoke. (L 599)

Leibniz to Hartsoeker, 6 February 1711

[285] *^[1]) *In the Draft of these letters we find at this point the following:* Substance, which has perception, is naturally representative of all the universe according to its point of view, and cannot cease to represent, as the universe cannot cease to act. And death is nothing other than the state of very confused perceptions, which differs only more or less from the state we find ourselves in when we sleep without having dreams that we can remember, or when we have some fainting spell in which our sensation [*sentiment*] is taken away. But there is reason to think that these confused perceptions are redeveloped, as happens when we awake from a doze or from a lethargy: it is true that the redevelopments after death do not happen so soon in simple animals, but it remains always reasonable that they happen; for that which is a representation of the universe cannot always remain in confusion. (G III 521)

Leibniz to Desmaizeaux, 8 July 1711

[286] There are apparently an infinity of degrees in perception, and consequently in *living things*. (NS 239)

Leibniz to Bierling, 12 August 1711

[287] And as in bodies we understand there to be impenetrability, and in general shape, though we are ignorant of the shapes of insensible bodies, so in intelligent souls there is perception and appetite, though we do not distinctly know the insensible ingredients of our

confused perceptions, which express insensible bodies. (G VII 501)

Leibniz to Hartsoeker, 7 December 1711

[288] In every case where we know something of the works of God, we find order there. It follows from this that there are no perceptions without organs. And I agree that there is no substance separate from and destitute of all bodies among creatures. And a body according to me is never pushed except by bodies according to the laws of mechanics. And with all that, everything is full of souls and organic bodies, and souls cannot perish naturally. One can say in a certain sense that there is knowledge in matter, comprehending everything that is found joined there: but life or perception cannot be produced or explained by the material attributes (extension, shape, motion) and it is only distinct perception which can begin and end. (G III 529)

Leibniz to Des Bosses, 16 June 1712

[289] But domination and subordination considered in the monads themselves consist in nothing but degrees of perfection. (G II 451)

Leibniz to Des Bosses, 20 September 1712

[290] You ask further: Why actually an infinity of monads? I reply that the mere possibility of an infinity is enough to establish this, since it is manifest how very rich are the works of God. But the order of things also demands it, for otherwise phenomena would not correspond to all assignable percipients. Indeed, we know some confusedness in our perceptions, however distinct they may be, and so there are monads corresponding to these confused ones as there are monads corresponding to the greater and more distinct ones. (L 607)

Leibniz to Des Bosses, 19 August 1715

[291] Therefore I should prefer to say that there are no substances over and above monads, but only appearances, but that these are not illusory, like a dream, or like a sword pointing at us out of a concave mirror, or like Doctor Faust eating up a cartful of hay, but that they are true phenomena, that is, in the sense that a rainbow or parhelion is an appearance,

and, in fact, in the sense that colors are appearances according to the Cartesians and in reality. It can be said that composite beings which are not a unity *per se* or are not held together by a substantial chain or . . . by one spirit are semi-entities. Aggregates of simple substances such as an army or a pile of stones are semi-entities; colors, odors, tastes, etc., are semi-accidents. All of these things would be mere phenomena, though real, if there were only monads without substantial chains. (L 614)

Metaphysical Consequences of the Principle of Reason, c. 1712(?)

[292] For the body corresponds to the soul not only in the so-called voluntary motions, but in all others as well; though, on account of habit, we do not notice that the soul is affected by or agrees with the motions of the body, or that the latter correspond to the perceptions and appetites of the soul. For the perceptions of these are confused, so that their agreement does not appear so easily. The soul gives orders to the body insofar as it has distinct perceptions, and serves it insofar as it has confused ones; however, anyone who has some perception in his soul can be certain that he has received some effect of that in his body, and vice versa. (MP 173)

[293] [§9] From this it also follows that every simple substance represents an aggregate of external things, and that in those external things, represented in diverse ways, there consists both the diversity and the harmony of souls. Each soul will represent proximately the phenomena of its own organic body, but remotely those of others which act on its own body. (MP 176)

[294] [§10] Therefore, since every organic body is affected by the entire universe by relations which are determinate with respect to each part of the universe, it is not surprising that the soul, which represents to itself the rest in accordance with the relations of its body, is a kind of mirror of the universe, which represents the rest in accordance with (so to speak) its point of view—just as the same city presents, to a person who looks at it from various sides, projections which are quite different. (MP 176)

[295] 11. But it must not be thought that, when I speak of a mirror, I mean that external things are always depicted in the organs and in the soul itself. For it is sufficient for the expression of one thing in another that there should be a certain constant relational law, by which particulars in the one can be referred to corresponding particulars in the other. Thus a circle can be represented by an ellipse (that is, an oval curve) in a perspectival projection, and indeed by a hyperbola, which is most unlike it, and does not even return upon itself; for to any point of the hyperbola a corresponding point of the circle which projects the hyperbola can be assigned by the same constant law. From this it comes about that a created soul necessarily has many confused perceptions, representing an aggregation of innumerable external things, but it (ap?)perceives distinctly what is closer or more prominent, and accommodated to its organs. But since it also understands reasons, the mind is not only a mirror of the created universe, but it is also an image of God. But this belongs to rational substances alone. (MP 176–77)

[296] But if it [the simple substance] should arrive at that state in which it has perceptions which are almost all confused, we call this ‘death’; for then a stupor arises, as in a profound sleep or in apoplexy. But since nature gradually unravels confusions, then that which we suppose to be death cannot be perpetual. But it is only rational substances which preserve, not only their individuality, but also their personality, by retaining or recovering consciousness of themselves, so that they can be citizens in the city of God, capable of reward and punishment. In them, therefore, the kingdom of nature serves the kingdom of grace. (MP 177)

Leibniz to Bourguet, 22 March 1714

[297] When I maintain that there is no Chaos, I do not mean that our globe or other bodies are never in a state of superficial [*exterieure*] confusion: for that is refuted by experience. The mass that Vesuvius hurled (for example) is one such chaos; but I mean that if one had sense organs penetrating enough to apperceive the small parts of things, he would find everything organized. And if he could augment this penetration continually as needed, he would always see in the same mass new organs which were imperceptible according to his preceding

degree of penetration. For it is impossible that a creature should be able to penetrate all at once to the least parcel of matter, since the subdivision actually goes to infinity. Thus the apparent Chaos is only a kind of taking away [*d'eloignement*], as in a reservoir full of fish, or rather as in an army viewed from afar, where we cannot distinguish the order that is observed there. I therefore believe that our globe was once in a state similar to that of a burning mountain; and it is at that time that the minerals that are discovered today, and that we can imitate in our furnaces, were formed. (G III 565)

Principles of Nature and of Grace, 1714

[298] 3. Everything is full in nature. There are simple substances everywhere, effectively separated from one another by their actions, which continually change their relations; and each simple substance or distinguished [*distinguée*] monad, which forms the center of a composite substance (as for example an animal) and is the principle of its uniqueness, is surrounded by a *mass* composed of an infinity of other monads, which constitute the body proper to this central monad, according to the affections of which it represents, as in a kind of center, the things that are outside of it And since everything is connected because of the plenitude of the world, and since each body acts on every other body, more or less, in proportion to its distance, and is itself affected by the other through reaction, it follows that each monad is a living mirror or a mirror endowed with internal action, which represents the universe from its own point of view and is as ordered as the universe itself. (AG 207)

[299] 4. . . .It is true that animals are sometimes in the state of simple living things, and their souls in the state of simple monads, namely when their perceptions are not distinguished [*distinguées*] enough to be remembered, as happens in a deep, dreamless sleep or in a fainting spell. But the perceptions which have become entirely confused [*confuses*] must be redeveloped in the animals, for reasons I shall give shortly. Thus it is good to distinguish between *perception*, which is the internal state of the monad representing external things, and *apperception*, which is *consciousness*, or the reflective knowledge of this internal state, something not given to all souls, nor at all times to a given soul. [. . . And the Cartesians have confounded] a *long stupor*, which arises from a great confusion of perceptions, with

death strictly speaking, in which all perception ceases. (AG 208)

[300] 13. For everything is ordered in things once and for all, with as much order and correspondence as possible, the supreme wisdom and goodness being able to act only with a perfect harmony: the present is pregnant with the future; the future can be read in the past; the distant is expressed in the proximate. One could know the beauty of the universe in each soul, if one could unfold all its folds, which only develop sensibly with time. But since each distinct [*distincte*] perception of the soul includes [*comprends*] an infinity of confused [*confuses*] perceptions which envelop the whole universe, the soul itself knows the things it perceives only so far as it has distinct [*distinctes*] and revealed [*revelées*] perceptions; and it has perfection to the extent that it has distinct [*distinctes*] perceptions. Each soul knows the infinite—knows all—but confusedly [*confusement*], as when I am walking along the seashore and hearing the great noise that it makes, I hear the particular noises of each wave, of which the whole noise is composed, but without discerning [*discerner*] them; our confused [*confuses*] perceptions are the result of impressions that the whole universe makes upon us. It is the same for each monad. God alone has distinct [*distincte*] knowledge of the whole, for he is his source. (AG 211)

Monadology, 1714

[301] The passing state which involves and represents a multitude in the unity or in the simple substance is nothing other than what we call *perception* . . . (§14)

[302] If we wish to call *soul* everything that has *perceptions* and *appetites* in the general sense I have just explained, then all simple substances or created monads can be called souls. But, since *sentiment* is something more than a simple perception, I think that the general name of monad and entelechy is sufficient for simple substances which only have perceptions, and that we should only call those substances *souls* the perception of which is more distinct [*distincte*] and accompanied by memory. (§19)

[303] For we experience within ourselves a state in which we remember nothing and have

no distinguished [*distinguée*] perception; this is similar to when we faint or when we are overwhelmed by a deep, dreamless sleep. In this state the soul does not differ sensibly from a simple monad; but since this state does not last, and since the soul emerges from it, our soul is something more. (§20)

[304] And it does not at all follow that in such a state the simple substance is without any perception. This is not possible for the previous reasons; for it cannot perish, and it cannot subsist without some property, which is nothing other than its perception. But when there is a great multitude of small perceptions in which nothing is distinguished [*distingué*], we are stupefied. This is similar to when we continually spin in the same direction several times in succession, from which arises a dizziness that can make us faint and does not allow us to distinguish [*distinguer*] anything. Death can impart this state to animals for a time. (§21)

[305] From this we see that if, in our perceptions, we had nothing distinguished [*distingué*] or, so to speak, in relief and stronger in flavor, we would always be in a stupor. And this is the state of bare monads. (§24)

[306] The creature is said to *act* externally insofar as it is perfect, and *to be acted upon* by another, insofar as it is imperfect. Thus we attribute *action* to a monad insofar as it has distinct [*distinctes*] perceptions, and *passion*, insofar as it has confused [*confuses*] perceptions. (§49)

[307] This interconnection or accommodation of all created things to each other, and each to all the others, brings it about that each simple substance has relations that express all the others, and consequently, that each simple substance is a perpetual, living mirror of the universe (sec. 130, 360). (§56)

[308] But he was unable to present any reason why this universal harmony, which results in every substance expressing exactly all the others through the relations it has to them, is impossible. (§59)

[309] [S]ince the nature of the monad is representative, nothing can limit it to represent only a part of things. However, it is true that this representation is only confused [*confuse*] as to the detail of the universe, and can only be distinct [*distincte*] for a small portion of things, that is, either for those that are closest, or for those that are greatest with respect to each monad, otherwise each monad would be a divinity. Monads are limited, not as to their objects, but with respect to the modifications of their knowledge of them. Monads all go confusedly [*confusement*] to infinity, to the whole; but they are limited and differentiated by the degrees of their distinct [*distinctes*] perceptions. (§60)

[310] In this respect, composites are analogous to simples. For everything is a plenum, which makes all matter interconnected. In a plenum, every motion has some effect on distant bodies, in proportion to their distance. For each body is affected, not only by those in contact with it, and in some way feels the effects of everything that happens to them, but also, through them, it feels the effects of those in contact with the bodies with which it is itself immediately in contact. From this it follows that this communication extends to any distance whatsoever. As a result, every body is affected by everything that happens in the universe, to such an extent that he who sees all can read in each thing what happens everywhere, and even what has happened or what will happen, by observing in the present what is remote in time as well as in space. “All things conspire,” said Hippocrates. But a soul can read in itself only what is distinctly [*distinctement*] represented there; it cannot unfold all its folds at once, because they go to infinity. (§61)

[311] Thus, although each created monad represents the whole universe, it more distinctly [*distinctement*] represents the body which is particularly affected by it, and whose entelechy it constitutes. And just as this body expresses the whole universe through the interconnection of all matter in the plenum, the soul also represents the whole universe by representing this body, which belongs to it in a particular way. (§62)

[312] Thus there is nothing fallow, sterile, or dead in the universe, no chaos and no confusion

except in appearance, almost as it looks in a pond at a distance, where we might see the confused and, so to speak, teeming motion of the fish in the pond, without discerning the fish themselves. (§69)

Leibniz to Remond, July 1714

[313] [Monads] all have *perception* (i.e., the representation of the multitude in the unity) and *appetite* (i.e., the tendency of one perception to another), which is called *passion* in animals, and *will* in cases where the perception is an understanding. (G III 622)

[314] This agreement [among the perceptions of substances] comes from the harmony pre-established in these substances, because each simple substance is a mirror of the same Universe, as enduring and rich as it, although these perceptions of Creatures can only be distinct with respect to a few things at a time and are diversified by the relations or, so to speak, by the points of view of these mirrors, which make it the case that a single Universe is multiplied in an infinity of ways by as many living mirrors, each representing according to its mode. (G III 623–24)

Leibniz to Bourguet, December 1714

[315] I hold perception to be the representation of plurality in the simple, and appetite to be the striving from one perception to another. (L 662–63)

Leibniz to Remond, 1715

[316] I grant to the Cartesians that the soul actually always thinks, but I do not grant that it apperceives all these thoughts. For our large perceptions and our appetites, which we apperceive, are composed of an infinity of small perceptions and small inclinations which we cannot apperceive. And it is in the insensible perceptions that the reason is found for what occurs in us; as the reason for what takes place in sensible bodies consists in insensible movements. (G III 657)

[317] It is sufficient to regard ideas as notions, that is to say, as modifications of our soul.

It is thus that the Schoolmen, Descartes, and Arnauld regard them. (G III 659)

Leibniz to Remond, 11 February 1715

[318] Furthermore, since all monads (except the primitive one) are subject to passions, they are not pure forces; they are the foundation not only of actions but also of resistances and passivities, and their passions are found in confused perceptions. It is this which envelops matter or infinity in number. (G III 636 = L 659)

Leibniz to Wolff, 18 May 1715

[319] You also see from this how the sense of harmony, that is, the observation of agreements [*concensus*] might bring forth pleasure, since it delights perception, makes it easier, and extricates it from confusion. (AG 233 = LW 171)

Leibniz to Bourguet, 5 August 1715

[320] However, it suffices that [the plant] has a variety in unity, for it to have a perception; and it suffices to have a tendency to new perceptions, for it to have appetite, according to the general sense that I give to these words. (L 664 = G III 581)

Leibniz to Masson, 1716

[321] [The author] would have also seen how there are always characters in the imagination that correspond to the most abstract thoughts—witness arithmetic and algebra. (AG 226 = G VI 626)

[322] [The author] would have seen . . . how these monads represent the universe. Only God has the penetration to see everything in them. But that does not prevent everything from being represented there, and one must know that even in the least portion of matter, he who knows all reads the whole universe in virtue of the harmony of things. It is true that this could not be if matter were not actually subdivided to infinity. (AG 228)

[323] There are successive perceptions, but there are also simultaneous ones, for, when there

is a perception of the whole, at the same time there are perceptions of its actual parts, and it is even the case that each part has more than one modification. There is a perception all at once, not only of each modification, but also of each part. These perceptions, however much they are multiplied, are different from one another, even though our attention cannot always distinguish [*distinguer*] them, and that is what makes confused perceptions, of which each distinct [*distincte*] one envelops an infinity because of its relation to everything external. (AG 229)

Leibniz to Clarke, 1716

[324] It is true that *reason* in the mind of a wise being, and *motives* in any mind whatsoever, do that which answers to the effect produced by weights in a balance. (§3, L 696)

[325] We must also distinguish between a necessity which takes place because the opposite implies a contradiction (which necessity is called logical, metaphysical, or mathematical) and a necessity which is moral, whereby a wise being chooses the best, and every mind follows the strongest inclination. (§4, L 696)

[326] As for moral necessity, this also does not derogate from liberty. For when a wise being, and especially God who has supreme wisdom, chooses what is best, he is not the less free on that account; on the contrary, it is the most perfect liberty not to be hindered from acting in the best manner. And when any other chooses according to the most apparent and the most strongly inclining good, he imitates therein the liberty of a truly wise being, in proportion to his disposition. Without this, the choice would be a blind chance. (§7, L 697)

[327] But good, either true or apparent—in a word, the motive—inclines without necessitating, that is, without imposing an absolute necessity. (§8, L 697)

[328] I have also shown that our will does not always follow the practical understanding, because it may have or find reasons to suspend its resolution till a further examination. (§11, L 697)

[329] It must also be considered that, properly speaking, motives do not act upon the mind as weights do upon a balance, but 'tis rather the mind that acts by virtue of the motives, which are its dispositions to act. And therefore to pretend, as the author does here, that the mind prefers sometimes weak motives to strong ones, and even that it prefers that which is indifferent before motives; this, I say, is to divide the mind from the motives as if they were without the mind as the weight is distinct from the balance and as if the mind had, besides motives, other dispositions to act by virtue of which it could reject or accept the motives. Whereas, in truth, the motives comprehend all the dispositions which the mind can have to act voluntarily, for they include not only the reasons but also the inclinations arising from passions or other preceding impressions. (§15, L 698)

[330] To assert also that the mind may have good reasons to act when it has no motives and when things are absolutely indifferent, as the author explains himself here; this, I say, is a manifest contradiction. (§16, L 698)

Leibniz to Clarke, Fifth Letter, 1716

[331] In truth and reality, this way of perception is wholly chimerical and has no place even in human souls. They perceive what passes without them by what passes within them, answering to the things without, in virtue of the harmony which God has pre-established by the most beautiful and the most admirable of all his productions. (L 711)

ABBREVIATIONS

- AG *Philosophical Essays*. R. Ariew and D. Garber, eds. Indianapolis: Hackett, 1989.
- B *Die Leibniz-Handschriften der Königlichen öffentlichen Bibliothek zu Hannover*. E. Bode-
man, ed. Olms-Hildesheim, 1966.
- CSM *The Philosophical Writings of Descartes*. 3 vols. J. Cottingham, R. Stoothoff, and D.
Murdoch, eds. New York: Cambridge University Press, 1985. Cited by volume and page
number.
- D Manuscript on the use of characters. In [Dascal 1987](#), vi.
- DM *Discourse on Metaphysics*. Cited by section number.
- DSR *De Summa Rerum: Metaphysical Papers, 1675-1676*. G.H.R. Parkinson, ed. New Haven:
Yale University Press, 1992.
- G *Die Philosophischen Schriften von Gottfried Wilhelm Leibniz*. C.I. Gerhardt, ed. Hilde-
sheim: Georg Olms, 1965. Cited by volume and page number.
- L *Philosophical Papers and Letters*. L.E. Loemker, ed. 2nd ed. Boston: Reidel, 1969.
- LC *The Labyrinth of the Continuum: Writings on the Continuum Problem, 1672-1686*.
R.T.W. Arthur, ed. New Haven: Yale University Press, 2001.
- LP *Leibniz: Logical Papers*. G.H.R. Parkinson, ed. Oxford: Clarendon Press, 1966.
- LW *Briefwechsel zwischen Leibniz und Christian Wolff*. C.I. Gerhardt, ed. H.W. Schmidt,
1860.
- M *Monadology*. Cited by section number.
- ML *Malebranche et Leibniz: Relations personnelles*. A. Robinet, ed. Paris: Vrin, 1955.
- MP *Leibniz: Philosophical Writings*. M. Morris and G.H.R. Parkinson, eds. London: J. M.
Dent & Sons, 1973.
- NE *New Essays on Human Understanding*. P. Remnant and J. Bennett, eds. New York:
Cambridge University Press, 1982.
- NS *Leibniz's 'New System' and Associated Contemporary Texts*. R.S. Woolhouse and R.
Francks, eds. Oxford: Clarendon Press, 1997.

- OE *Remarks on the Book on the Origin of Evil, Published Recently in England.* Cited by section number from G VI 400–36.
- P “The Secret of Analysis in Physics.” Trans. by G.H.R. Parkinson in [Parkinson 1982](#), 20n.26.
- PNG *Principles of Nature and of Grace.* Cited by section number.
- S *Monadology and Other Philosophical Essays.* P. Schrecker and A.M. Schrecker, eds. Indianapolis: Bobbs-Merrill, 1965.
- T *Theodicy.* Cited by section number from G VI 16–365.

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