13
PHILOSOPHY OF LANGUAGE
Walter Ott

[T]he light of human minds is perspicuous words, but by exact definitions first snuffed, and purged from ambiguity; *reason* is the *pace*; increase of *science*, the *way*; and the benefit of mankind, the *end*. And on the contrary, metaphors, and senseless and ambiguous words, are like *ignes fatui*; and reasoning upon them is wandering among innumerable absurdities; and their end, contention, and sedition, or contempt.

– Thomas Hobbes[1]

How language works – its functions, mechanisms, and limitations – matters to the early moderns as much as it does to contemporary philosophers. Many of the moderns make reflection on language central to their philosophical projects, both as a tool for explaining human cognition, and as a weapon to be used against competing views. Even in philosophers for whom language is less central, we can find important connections between their views on language and their other philosophical commitments.

This is not to say that language matters to the moderns for the same reasons it matters to us. In what follows, I begin by asking why reflection on language occupies the privileged place it does in so many of their works. In the second section, I consider the possibility of language in nonhuman animals, partly to discover just what the moderns think counts as a language. If we can find out why some philosophers think that animals that clearly produce articulate sounds in response to their environments nevertheless fall short of being language users, we shall have a good idea of just what these thinkers take language to be. Here I shall say something briefly about what some moderns thought language could *become*: a perfect instrument for the communication and discovery of truths.

In the third and fourth sections, I explore how these philosophers think human languages actually work. The modern period is what Ian Hacking calls "the heyday of ideas": most philosophers defend a broadly mentalistic picture, according to which words have meaning only to the extent that they are associated with mental objects or events. Language as such contributes nothing to thought and inherits whatever meaning it has from thought. I shall argue that, on the whole, the philosophers of the period do not believe that words refer at all, whether to things or ideas; neither do words have ideas as their (Fregean) sense. Instead, words *indicate* ideas in the mind of the person using them.

Quine calls the claim that words get their meaning by being associated with private mental contents "the museum myth" (1969, 27). Frege and Wittgenstein, each in his own way, critique this general picture on the grounds that it makes meaning publicly inaccessible. But objections to the dominant view on the basis of the privacy of the mental are hardly news; Locke's indefatigable critic, John Sergeant, attacked him on these same lines. As we shall see, the moderns are not without their defenses.

With this as background, we can then (in section 5) trace out the consequences of the moderns' views on language. Thus, I proceed to the question of definitions, so central to the Scholastic conception of *scientia*. I shall argue that in some cases the moderns' understanding of how language functions reins in the aspiration to real definitions. It is here that we shall see distinctive conceptions of the signification of words put to work in attacking Scholastic views. And we shall also find defenders of real definitions, such as Leibniz and Sergeant, fighting back.

In section 6, we turn to the problem of universals. Even the most rabid nominalist must account for one obvious linguistic phenomenon: the applicability of a single name to multiple individuals.[2] More turns on this question than might at first appear. For the Scholastics, the mind's ability to use universals in thought – in Aquinas's jargon, to abstract the intelligible species from its material conditions – is indicative of the intellect's immateriality.[3] Thus it is particularly important for a materialist like Hobbes, and for anyone who, like Locke, wishes to remain agnostic about the materiality of the mind,[4] to offer another explanation.[5]

Having dealt with the signification of individual words, we can turn to propositions (section 7). The issue is interesting in its own right, because the moderns confront recognizably contemporary problems, such as the unity of the proposition. But it also has implications for the further development of empiricism in particular. By making room for syncategorematic terms – terms such as 'is,' 'if,' and 'but' – some philosophers believe we can sensefully talk about that which lies beyond all experience. At the end of this chapter (section 8), I hope to indicate how otherwise obscure questions about the nature of the proposition lie at the heart of some core issues in early modern philosophy generally.

1. Why does language matter to the moderns?[6]

In the early modern period, reflection on language is undertaken not so much as a worthy endeavor in its own right but as a means of diagnosing the errors of one's competitors. What spurs most of these figures is not disinterested curiosity but a need to wrest control of the intellectual climate from the schools. Thus, the most obvious way in which language matters to the moderns is as a danger and, correspondingly, as a possible means of cognitive "therapy." Having recognized a family of errors as flowing from some mistaken assumption about how words work, one is then cured of the desire, say, to suppose that each thing is possessed of its own nature or essence, or that each quality for which we have a word must correspond to some real quality in the object.

Some of the dangers on which the moderns fixate are thoroughly pedestrian. The constant injunctions one finds to avoid ambiguity and metaphor in philosophical or scientific contexts are hardly new. Nor is it particularly hard to see why such injunctions should be so common. As the Aristotelian view[7] crumbles, so many competitors arise that even the simplest words no longer have an agreed upon meaning. In 1629,

Descartes writes, "[a]s it is, almost all our words have confused meanings, and men's minds are so accustomed to them that there is hardly anything which they can perfectly understand."[8] When there is no universally accepted worldview to take the place of the old, even a word like 'weight,' let alone 'gravity,' takes on different meanings, depending on which of the available theories the speaker happens to hold.[9]

Replacing the Aristotelian view means uprooting common ways of speaking. Bacon, for example, says that unless "men are forewarned and arm themselves against them," the idols or illusions[10] enshrined in the old philosophy will infect the new.[11] At a deeper level, then, we find the worry that a major barrier to the acceptance of the new philosophies is ordinary language itself. Both Aristotelianism and ordinary speech are shot through with ontological assumptions many of the new philosophers wish to brand as false. Indeed, despite their technical sophistication (or, as most moderns prefer, their predilection for "insignificant speech"),[12] the Scholastics are seen as simply codifying the errors embedded in ordinary language.

Consider the doctrine of secondary qualities. Galileo, Descartes, Locke, and others agree that qualities such as color and taste are either bare powers or nothing at all in the bodies themselves. There are no real, nondispositional feature of bodies that we report with words like 'fuchsia' or 'tangy.' How were the Scholastics led to think otherwise? Partly, the moderns think, because they took ordinary language as a good guide to metaphysics. When we have meaningful words for a quality, we are tempted to think that they must correspond to a genuine quality in the objects of which we predicate them.[13]

This is no mere misstep on the part of the Scholastics but an instance of a pervasive tendency, common to the schoolmen and to the rest of us, to fall under the spell of language. In his *Treatise on the Emendation of the Understanding*, Spinoza writes that "words, no less than imagination, can bring about many grave errors unless we exercise great caution." For Spinoza, words are "a part of the imagination," and, having been instituted by human beings according to the imagination and not the intellect, must be used with care.[14]

In giving a diagnosis of the tendency to take ordinary language as our guide to metaphysics, the moderns typically point to the danger of focusing on words rather than things. To put it somewhat hyperbolically, their worry is that words will usurp the place that ideas should properly play in thought.[15] "Words," Hobbes writes, "are wise men's counters; they do but reckon by them; but they are the money of fools."[16] As Arnauld and Nicole put it in their *Logic*:

> [O]ur need to use external signs to make ourselves understood causes us to connect our ideas to words in such a way that we often pay more attention to the words than to the things. Now this is one of the most common causes of confusion in our thoughts and discourse.[17]

But why were the moderns so worried about this particular pitfall? One answer comes from their attitude toward Scholastic natural philosophy. In its simplest form, Aristotelian science is classificatory. One begins with a set of definitions arrived at through experience. These *per se* or essential predications are intended to capture the essence of the thing.[18] One then uses these definitions in syllogisms that are not just formally valid but that show why something *must* be the case. To give a hackneyed example, the definition of man as a rational animal, plus the premise that Socrates is a man, allows us to infer that Socrates is rational. More than this, however, the syllogism is also supposed to *explain* why Socrates is rational, namely by showing that he shares in the essence of

man. This admittedly simplified example nevertheless captures the basic form a completed Aristotelian science would take: a set of demonstrations, based on real or *de re* definitions, that allows us to explain why things happen as they do.[19]

Although Aristotle and the Scholastics agree that empirical observation is essential for discovering real essences, the moderns worry that syllogistic logic depends too much on definitions generated not even from the armchair but from the classroom. One's conclusions will be only as good as the definitions with which one starts. The general attitude is that the Scholastic program for science is a garbage in–garbage out system.

However useful syllogisms might be for stating one's results, most of the figures I shall discuss agree that they are not a useful tool for discovery.[20] More than this, syllogisms cozen philosophers into thinking they are making genuine progress when all they are doing is manipulating elements in a formal system. This kind of worry is no doubt partly responsible for the low esteem in which formal approaches were generally held. In Locke's *Essay*, for example, we find an insistence on the mind's capacity to detect errors in reasoning without the help of Scholastic textbooks and, more generally, without the aid of any kind of formal analysis.[21] Such hostile attitudes toward syllogistic logic are admirably expressed by Joseph Glanvill, a friend of Locke's, who dismisses Scholastic natural philosophy as a "flatulent vacuity."[22]

But this is not to say that there were not philosophers pushing in the other direction. Arguing against Locke, Leibniz claims that the invention of the syllogism is "one of the finest, and indeed one of the most important, to be made by the human mind."[23] Harking back to his own ambitions for a universal characteristic, a numerical system that would form the perfect language, Leibniz speaks of syllogistic logic as a kind of "universal mathematics."[24] And Hobbes devotes part of his treatment of logic to syllogisms. As we shall see, these philosophers' divergent attitudes toward the formalism of the Scholastics can be traced back to their own approaches to definition. If one begins with real definitions, definitions that capture the essence or, in Hobbes's case, the causes of a thing, the products of one's syllogistic reasoning might be correspondingly more valuable. The disagreement illustrates the complex relationship between the Scholastics and the moderns: even when they are dismissed, Scholastic ideas or methods percolate through modern texts.[25]

2. Languages, animal and perfect

In his *Discourse on Method* of 1637, Descartes argues that we have "two very certain means" of distinguishing beings that have souls from everything else, including nonhuman animals and machines.[26] Having explained the body and nearly all its motions and functions in purely mechanical terms, Descartes must now find some way of distinguishing ensouled beings from others.[27] The best evidence we can have for the presence of a soul is the presence of reason, the "universal instrument,"[28] and language. Though the operations of reason extend more widely, they include their most obvious manifestation, language. Descartes argues that only a human being is able to "produce different arrangements of words so as to give an appropriately meaningful answer to whatever is said in its presence."[29]

Descartes later drops the reference to reason or subsumes it under the heading of language. In his 1646 letter to the Marquess of Newcastle, Descartes claims that

> [i]n fact, there are none of our external actions that could assure those who examine them that our body is not simply a machine that moves itself, but

contains a soul that has thoughts, were it not for words or other signs made in reference to topics that present themselves without any relation to any passion.[30]

Each of the qualifications Descartes makes here is important. First, to avoid begging the question, he allows that signs other than words can constitute a language. (Descartes does not want to deny that mutes can in a sense "speak.") Second, it is vital that the signs produced not have "any relation to any passion" simply because signs so used can be explained purely mechanically. This excludes not only grunts and cries of pain but, Descartes thinks, any signs a being or machine can be taught to produce on command. When your parrot tells you that Wellington won at Waterloo, it does so only in response to some stimulus. By contrast, even a madman's disjointed and irrational speech is generated spontaneously and not simply in response to external stimuli.[31]

What lessons can we draw from these arguments? At a minimum, a language speaker must use signs to indicate to others her own mental states. But this is not sufficient. Language use requires the deployment of signs in such a way as to indicate thoughts that are not tied to the being's immediate surroundings or passions. This is a very vague criterion, but Descartes's general point seems clear. More controversially, Descartes's talk of our ability to produce different "arrangements of signs" suggests a criterion of compositionality: one must be able to use the same signs, differently arranged, to indicate different thoughts.[32]

Given that the chief use of a language is to express our thoughts, what, under ideal conditions, would language look like? Having looked at one end of the spectrum – sounds and marks that do not rise to the level of language use – we can now pause to look at the other. The intense awareness of the arbitrary nature of words in the modern period made the prospect of a perfect language seem at once intensely desirable and, in some minds, achievable. Criticizing such a proposal passed on to him by his friend Mersenne, Descartes sketches how such a language would have to be developed, namely on analogy with mathematics. Given a limited number of primitives, one can understand any integer. So, order is what is needed; all possible thoughts would have to be arranged on analogy with the order of natural numbers. If such an order could be discovered, it would enable a recursive generation and comprehension of any possible thought. Such a perfect language depends on the true philosophy that would separate out all the simple ideas in the human imagination out of which all thoughts are made.[33] Descartes is pessimistic about the prospects for a perfect language: it would be tantamount to a "terrestrial paradise." Leibniz, for his part, is more sanguine, and drew up plans for what he calls the "universal characteristic."[34] For Descartes, mathematics is a model or analogy for the perfect language; for Leibniz, the perfect language just is mathematics, with the addition of a semantics that joins each number to an idea. Once in possession of such a language, we could settle any dispute simply by calculation. Leibniz seems never to have abandoned his hopes despite never making any real progress toward achieving them.[35]

Neither of the ideal languages contemplated by Descartes or Leibniz would represent a return to the language of Adam, who (some thought) possessed a mystical language whose words expressed the true natures of things. Jacob Boehme is perhaps the most prominent figure of the era to hanker after an Adamic language and to accord it a quasi-mystical status. Kabalistic thinkers of the era also exhibit similar tendencies.[36] Instead, an ideal language would be a purely conventional system for formulating any possible thought.

Nearly all parties to the debate accept that words are signs imposed purely arbitrarily. Leibniz might seem to be the exception, and in a sense, he is. In response to Locke's assertion that words are arbitrarily chosen, Leibniz argues that, although our selections of sounds are not determined by any natural necessity, nevertheless, "they are settled by reasons – sometimes natural ones in which chance plays some part, sometimes moral ones which involve choice."[37] (Leibniz devotes his single lengthiest response to Locke in all of the *New Essays* to this issue.) Leibniz tries to establish two interconnected points: that all European languages have a "primitive root-origin"[38] and that this language in some cases was formed in imitation of the sounds of nature. The latter point is designed to support the former. Thus, for example, Leibniz thinks that the Latin *coaxere* and the German *couaqen* or *quaken* were derived from a common word intended to mimic the croaking of frogs. However prescient Leibniz's hypothesis of an ur-language might be, it is far from the mystical view of Boehme: there is no suggestion that this primitive language somehow grasps the natures of things, though of course it might have been more convenient for expressing certain thoughts, or easier to learn.[39]

These reflections on languages, animal and otherwise, reveal the key background assumption of most modern thinking about language: words are signs, established by convention, whose primary purpose is to allow others to discern our thoughts. This sounds like a truism; as we shall see, it is more controversial than first appears. Moreover, it is only the scaffolding on which a completed view might be erected. Much will turn, as we shall see, on just how one understands the claim that words are *signs*.

3. Signs and names

It is not an exaggeration to say that all modern thinking about language stems from a single paragraph in Aristotle:[40]

> Now spoken words are symbols of affections in the soul, and written marks symbols of spoken sounds. And just as written marks are not the same for all men, neither are spoken sounds. But what these are in the first place signs of – affections of the soul – are the same for all; and what these affections are likenesses of – actual things – are also the same.
>
> (*De interpretatione* 16a3–8)[41]

Spoken words are signs (*semeia* in Greek; in Latin, *notae*) of passions in the mind. By "affections" (*pathemata*) Aristotle means not affections in our contemporary sense but mental representations or concepts. A word itself is an arbitrarily chosen symbol or sign that is in no way tied to things in the world; the work of intentionality is done wholly at the level of mental representations. These affections, Aristotle says, resemble or are likenesses of real things. On this view, the difference between parrot-speak and language lies in the subjective experience of the speaker. However astutely one might mimic the speech of a Richard Feynman, unless one has the relevant mental acts and objects, one is merely parroting him. Thus, a language speaker must not only be able to produce a variety of articulate sounds; as Locke puts it, she must also *be able to use these sounds, as signs of internal conceptions.*[42]

Each of us, on the dominant modern view, has her own idiolect, what we might call thoughtish. This is composed of the ideas and acts of her mind. Given our shared mental structures and capacities, and the fact that we inhabit a single world, all humans can in

principle share the same language of thought.[43] But each person's thoughts are her own, accessible to others only indirectly. The role of language, then, is to turn isolated minds into a community of mutually intelligible beings. As Hobbes writes, "the general use of speech, is to transfer our mental discourse, into verbal."[44]

How this transference is effected is controversial. The Scholastics typically use 'signify' in a broad sense to mean "express," "reveal," or "make known."[45] Taken in this sense, it is natural to say that words can also signify things, qualities, or extramental states of affairs. Precisely how the moderns understand signification is something we shall have to discover. I shall now argue that they typically construe signification in a much-narrower way, so that only ideas or mental acts can be signified by words.

Note that Aristotle's text speaks of two relations: (R1) word–mental object and (R2) mental object–thing in the world. The first is signification; the second is, on Aristotle's view, resemblance. A mental object represents a thing in the world in virtue of resembling it. We can begin to understand signification if we contrast it with this second relation.

As we have seen, the moderns in general wish to reject the Aristotelian's assumption that each phenomenal quality we experience is a real quality in the object itself. (This remains the case, even though there is an exception to the rule: ideas of primary qualities, some philosophers such as Locke believe, do indeed resemble those qualities in objects themselves.)[46] But what then is the relation between an experience of redness and the object itself? That is, in the case of secondary qualities, what is R2? If the real features of bodies are just size, shape, and movement, R2 cannot, in this case, be resemblance, because there is nothing in the object that our idea of yellow or sour resembles. Perhaps reflecting on R1 can provide a solution. Presenting his views on light in the early *Le Monde*, Descartes exploits the Aristotelian's use of linguistic signification in R1 to argue that R2 need not be understood in terms of resemblance. Addressing an imaginary Scholastic interlocutor, Descartes writes,

> Words, as you well know, bear no resemblance to the things they signify, and yet they make us think of these things. . . . Now if words, which signify nothing except by human convention, suffice to make us think of things to which they bear no resemblance, then why could nature not also have established some sign which would make us have the sensation of light, even if the sign contained nothing in itself which is similar to this sensation? Is it not thus that nature has established laughter and tears, to make us read joy and sadness on the faces of men?[47]

Descartes goes on to use an example from Galileo's *The Assayer*: we experience tickling when certain motions occur, but there is nothing in the experience that resembles these motions.[48] So far, we know only that signification is not resemblance. But what is it? Descartes's text offers a minimal characterization: for *x* to signify *y* is for *x* to make us think of *y*. As Arnauld and Nicole put it in their *Logic*, "the nature of the sign consists in prompting in the senses the idea of the thing symbolized by the idea of the symbol."[49] This can happen either by convention (as in words, R1) or by nature (as in sensations, R2).

As it stands, this Cartesian view of signs is pretty clearly flawed. Most obviously, it suffers from what we might call the conjunction problem.[50] Any given utterance can make me think of almost anything at all: 'rain' can make me think of the stuff that falls from the sky, but it can also make me think of the Teutonic songbirds Milli Vanilli or of

the grass withering in my yard. If this is all it takes to be a sign, then almost everything is a sign of almost everything else. The point is not that words are ambiguous, but rather even a single, univocal word can call to mind any number of things, only one (or some) of which is plausibly construed as its meaning in the pretheoretical sense. The same goes for natural signs; lactation, to use another of Aristotle's examples, can make me think of pregnancy, but it can also call to mind the practice of wet-nursing or the antibiotic properties of mother's milk.

More important, the Cartesian view focuses on only one of the jobs the moderns as a whole expect words to do. Locke speaks for the moderns when he claims that, because a person's ideas lie hidden in his own mind and are not directly accessible to others, he must "be *able to use these Sounds, as Signs of internal Conceptions*; and to make them stand as marks for the *Ideas* within his own Mind, whereby they might be made known to others."[51] So we need now to look for an understanding of signification that focuses on this second role: not merely causing ideas in the hearer but serving as signs of ideas in *the speaker*. Discovering just how this second role is satisfied will also allow us to answer the conjunction problem, both with regard to R1 and R2.

Because speech requires that we be able to use sounds as signs of our internal conceptions, it also requires that the speaker *intend* to use signs in a certain way. An intention to reveal one's thoughts, then, is at least a prerequisite for accomplishing the core purpose of language. But how is this intention to be satisfied?[52]

Let us return to the Port-Royal text. A sign in general is just anything that makes us think of something other than itself. There are many ways of causing people to form thoughts, however, and lumping them all together is misleading. Consider some of the examples the Port-Royalians use: some signs, such as maps and paintings, bring about the thought of what they signify by resembling, or in some way being isomorphic to, their objects. But this cannot be the sense of 'sign' in linguistic contexts. Neither the sound 'map' nor the shape of its letters resembles or maps the idea *map*. (We have already seen Descartes exploit this fact.) We need, then, a different notion, which will also fall under the genus of signification. Now, Arnauld and Nicole also say that facial expressions are signs of emotions, that a hot cinder is a sign of a fire, and that symptoms indicate a disease. These things cause us to think of what they signify not by resembling them but by *indicating* them. I suspect this is also what Aristotle means when he calls words *semeia*; in any case, it is pretty clearly what the moderns mean.[53]

Hobbes makes all of this considerably clearer. He writes,

> Now, those things we call SIGNS are the *antecedents of their consequents, and the consequents of their antecedents, as often as we observe them to go before or follow after in the same manner*. For example, a thick cloud is a sign of rain to follow, and rain a sign that a cloud has gone before, for this reason only, that we seldom see clouds without the consequence of rain, nor rain at any time but when a cloud has gone before. And of signs, some are *natural*, whereof I have already given an example, others are *arbitrary*, namely, those we make choice of at our own pleasure, as a bush hung up, signifies that wine is to be sold there; a stone set in the ground signifies the bound of a field; and words so and so connected, signify the cogitations and motions of our mind.[54]

In this famous passage, Hobbes offers a clear account of just how words function to reveal our thoughts to others. Natural signs can be said to mean what they signify: to use

an example of H. P. Grice's, it is natural to say such things as "these spots mean measles." Conventional signs are arbitrary but, when used by people intending to participate in those conventions, can equally well function as indicators. This is the role of words.

As we have seen, the Scholastics typically use 'signify' in a broad sense to mean express, reveal, or make known. It is a matter of debate among the Scholastics whether words signify the matter or form of things, or the substance generated by their combination. I am suggesting that most of the moderns use a considerably narrower sense: indication. A word does indeed make known or reveal the speaker's ideas, but only by virtue of indicating them. Armed with his notion of signification, Hobbes addresses the Scholastic debate directly:

> But seeing names ordered in speech (as is defined) are signs of our conceptions, it is manifest they are not signs of the things themselves; for that the sound of this word *stone* should be the sign of a stone, cannot be understood in any sense but this, that he that hears it collects that he that pronounces it thinks of a stone. And, therefore, that disputation, whether names signify the matter or form, or something compounded of both, and other like subtleties of the *metaphysics*, is kept up by erring men, and such as understand not the words they dispute about.[55]

The argument couldn't be simpler: because stones do not appear whenever I say the word 'stone,' it is obvious that 'stone' does not signify stones, but only our idea of them.[56] It is pointless, then, to wonder whether words signify form, matter, or substance; the answer is, none of the above.

To sum up: words play at least two roles. They cause the hearer to think of an idea, and they indicate an idea in the mind of the speaker. (They can also serve as what Hobbes and Locke call marks, reminders to oneself of what one has been thinking. In this respect, they need not have any public use attached to them.)[57] These two roles are easily conflated: it is by first serving as an indication that a word attains its power to cause in the hearer the idea it indicates in the mind of the speaker.[58]

Locke is the first figure I have found to explicitly separate these roles. Locke famously says that "words, as they are used by Men, can properly and immediately signify nothing but *Ideas*, that are in the Mind of the Speaker" (3.2.4: 406). (We will come back to the "properly and immediately" later.) It is only in their role as indications of ideas that words can be said to be signs. This is clear from Locke's stipulation that they are not just signs of ideas but signs of ideas *in the mind of the speaker*. Whether they cause the right ideas in one's audience or not, words are not signs of *their* ideas, but only of the speaker's.

Locke of course recognizes that we hardly ever explicitly infer from a speaker's words to her ideas and instead simply allow them to raise up ideas in our own minds.[59] We suppose that our words are indications not only of our own ideas but also of ideas in the minds of others. And this, Locke thinks, is simply a mistake:

> [Men] *suppose their Words to be Marks of the* Ideas *in the Minds also of other Men, with whom they communicate*: For else they should talk in vain, and could not be understood, if the Sounds they applied to one *Idea*, were such, as by the Hearer, were applied to another, which is to speak two Languages. But in this, Men stand not usually to examine, whether the *Idea* they, and those they discourse with have in their Minds, be the same: But think it enough, that they use the

Word, as they imagine, in the common Acceptation of that Language; in which case they suppose, that the *Idea*, they make it a sign of, is precisely the same, to which the Understanding Men of that Country, apply that name.[60]

To be sure, successful communication requires that the interlocutors associate the same ideas with the same words. But we cannot simply assume this; given the conventional nature of language, it is all too common for speakers to talk past each other.

It is by using words as indications of, or grounds for inference to, our own thoughts that we make ourselves understood. How, though, does any of this help with the conjunction problem? Having replaced the broad characterization of 'sign' provided by the Port-Royalians with the more particular concept of a sign as an indication, it might seem that this is a problem no longer. Not so. A spoken word might indicate an idea in the mind of the speaker, but it also indicates the presence of oxygen, that the speaker has a larynx, and so on. The same is true of our second relation, R2, that between an idea and what it signifies. An occurrence of the visual idea of a toad on a toadstool in my visual field indicates the presence of a toad, but it also indicates that I am not in outer space, that gravity is behaving itself, and so on.

There is a flip side to this objection: a spoken word does not always indicate the same idea on every occasion, as Locke is at pains to point out. Similarly, I do not token the sensory idea *frog* when and only when I am in the presence of frogs: any number of things, from poorly seen crabs to shadows, can trigger this idea. So, what then does this idea signify? It seems we have to say that it signifies a disjunction: in the case of 'frog,' it signifies the disjunction of all those ideas in the minds of speakers using them, and in the case of the idea *frog*, it signifies the disjunction of everything that causes it. This is the disjunction problem.

The clearest answer to these problems comes from Locke. Let's begin with the case of ideas and their objects, relation R2. Now, some ideas – ideas of primary qualities – resemble what they represent, namely qualities of bodies. But *all* ideas of sensation signify what causes them:

> Our *simple* Ideas *are all real*, all agree to the reality of things. Not that they are all of them the Images, or Representations of what does exist, the contrary whereof, in all but the primary Qualities of Bodies, hath been already shewed. But though Whiteness and Coldness are no more in Snow, than Pain is; yet those *Ideas* of Whiteness, and Coldness, Pain, *etc.*, being in us the Effects of Powers in Things without us, ordained by our Maker, to produce in us such Sensations; they are real *Ideas* in us, whereby we distinguish the Qualities, that are really in thing themselves. For *these several Appearances, being designed to be the Marks, whereby we are to know, and distinguish Things*, which we have to do with; our *Ideas* do as well serve us to that purpose, and are as real distinguishing Characters, whether they be only constant Effects, or else exact Resemblances of something in the things themselves: the reality lying in that steady correspondence, they have with the distinct Constitutions of real Beings.[61]

The sensation of cold resembles nothing in the snow that caused it. What, then, is the use of having such a sensation, if inspecting it offers no guide to the real qualities of the object? Although not resembling the object, the idea of cold, we might say, causally co-varies with the power in the object to produce it. So, all simple ideas of sensation,

whether resembling anything in bodies or not, indicate those qualities that cause them. This is good evidence that Locke takes words to be indicators as well, assuming he uses 'sign' univocally.

On its own, of course, the fact that some ideas represent their objects by being caused by them does not help with the problems we have been looking at. But Locke's story is not a purely causal one: recall that ideas are "designed" or intended by God to serve as signs or marks of qualities in objects. So, what an idea signifies is not just anything that happens to cause it but what God *intended* to cause it. These usually, though not always, overlap. Thus, given the teleological element, the disjunction problem disappears.[62] The conjunction problem vanishes as well: although the occurrence of an idea of white indicates many things about the environment, it is only intended by God to indicate one thing: the presence of an object endowed with the appropriate qualities and powers.[63]

The case is not so different with words. Remember that, by participating in a complex set of conventions, we can use words to indicate what passes in our minds. Although a spoken word also indicates that the speaker has a larynx, this is not what the word is *intended* to do, considered from the point of view of this convention.

To make this clearer, consider another of Hobbes's examples of a conventional sign, one that does not involve spoken or written language. Although a pile of stones might indicate anything at all, when I have reason to believe that my neighbor is aware of the conventions of marking the boundary of a field, I can legitimately infer that the stones are there for that purpose. Notice that this attributes a precise set of intentions to my neighbor, as well as an ability to predict mine.

Although few writers in the period develop this picture of language to the same degree as Locke, it seems to be what we might call the default setting for the moderns. The word-thing relation is broken into two: word-idea (R1) and idea-thing (R2). The analysis of R1 requires a notion of signification as indication, and at least in the case of secondary qualities, so does R2.

4. Complications and objections

As I have indicated, the broad outline sketched previously is filled out in different ways among the moderns. In this section, I want to discuss Hobbes's picture in more detail before moving on briefly to Locke and then to some of the most important objections lodged against these sorts of views. Although first articulated in the modern period, these objections will be familiar to readers of twentieth century philosophy, where they resurface, though usually without any awareness of their antiquity.

Every noun is what Hobbes calls a "name." Now, Hobbes is clear that some names, such as "man," "tree," and so on, are names "of the things themselves."[64] Other names, like 'nothing,' are the names of, well, nothing. What is this relation of naming? Names themselves fall into two categories: marks and signs. A mark is a word taken by a single user as a means of recalling what he has previously thought. This use is logically and temporally prior to its use as a sign: once a speaker uses a name as a mark, he is then able to use it in such a way as to allow others to infer what he is thinking.[65]

So far, so good; but none of this helps explain how it is that 'dogs' can name dogs. These sounds or inscriptions either mark a speaker's own previous thoughts or signify those thoughts to others. Hobbes says nothing at all about the relation of naming, leading some to think that he takes it as a primitive.[66]

This might be the case, but I suspect there is a more charitable answer. Recall Hobbes's previous claim that the only sense in which 'stone' can signify a stone is "that he that hears it collects that he that pronounces it thinks of a stone."[67] If we want a way to explain how 'stone' can *name* a stone, this is it: the word-object relation of naming must run through the word-idea relation (signification as indication) and from there to the idea-thing relation (representation, however that is accomplished).

We find a similar conundrum in Locke. For as often as Locke says that words signify, or primarily signify, nothing but ideas in the mind of the speaker, he also speaks of words naming or designating things. One might think that he is appealing to some further and primitive word-thing relation, not reducible to R1 and R2. But the text is quite puzzling, because Locke also says that words "are names of *Ideas*."[68] Although this is controversial, I find it overwhelmingly likely that Hobbes and Locke are both acquiescing in common ways of speaking and using the naming relation as a shorthand. This is only to be expected, because stating the two-part relation between word and object is rather cumbersome.

A second puzzle is generated by Locke's talk of primary signification. Sometimes Locke says not that words signify nothing but ideas in the mind of the speaker but that they *primarily* do so, implying that in some secondary sense they signify things themselves.[69] Unfortunately, Locke never so much as uses the phrase "secondary signification," or anything remotely like it. It was fairly common in late Scholasticism to distinguish between the primary signification of words, namely ideas, and their secondary signification, namely things. But Locke clearly intends his claim about words to tell against these same Scholastics, as we shall see later. Why, then, would he be helping himself to some of their jargon?

Again, I think the answer is convenience. We have seen Hobbes claim that there is indeed a sense in which words signify things. It would be natural enough for Locke to have this same sense in mind – words secondarily signify things in the sense that they signify ideas, which in turn represent things. Even if Locke's occasional talk of "primary signification" implies a notion of secondary signification, he need not be read as introducing an irreducible and novel category of linguistic function.[70]

Before moving forward, we should note just how foreign this picture of language is to many twentieth century philosophers. Ian Hacking (1975) goes so far as to deny that any of these figures, particularly Hobbes, actually *has* a theory of meaning. Though hyperbolic, Hacking's point is a useful guard against anachronism: the Fregean notions of sense and reference really have no place in the moderns. A stone at the edge of a field is just not the right sort of thing to refer, or have a sense; it merely indicates. Nor do words, in and of themselves, carry with them any mode of presentation or reference. This is hardly surprising, given the use the moderns think words must be put to: words serve only as the means by which we make our thoughts known to one another. It is the thoughts themselves that present things in a given way and refer to or pick out individuals in the world. Indeed, if one is determined to find an analogue for *Sinn* and *Bedeutung* in the modern period, the best place to look is not words but ideas.[71] The Port-Royal *Logic*, for instance, speaks of an idea's comprehension– "the attributes that it contains in itself" – and its extension– "the subjects to which the idea applies."[72]

Before going on to show how this picture gives the moderns some tools with which to attack their opponents, we should consider three fairly obvious objections.

First, this indicator approach to language can seem hopelessly myopic. Even if it is suited to explaining the fact-stating uses of words,[73] it seems to ignore a wide variety

of linguistic acts. Words can be used to embarrass, attack, promise, and so on, and on, and on. Although it is common to associate this sort of insight with J. L. Austin in the twentieth century, George Berkeley in the eighteenth was to make this a core issue in his debate with Locke.[74] And recognition of such other uses of words comes early on in the modern period. We have already looked at Descartes's discussion of the use of sounds to indicate emotions or pain (though of course he does not think these uses amount to a use of *language per se*.) Hobbes, too, makes a point of discussing the use of speech to express emotions.[75] Hobbes also is keenly aware that people sometimes speak in order to please others; he lists this among the uses of language, alongside its role as signifier of ideas. (Hobbes lists the use of language to injure or "grieve" others among its abuses.) Given the driving forces behind the moderns' interests in language, it should hardly be surprising that they largely neglect the non-fact-stating uses of language. What is more, many of these other uses of language are parasitic on its role as a means of communication. No one could use the phrase 'Sellars said so' as a means of intellectual intimidation if it did not straightforwardly signify a set of ideas and mental acts.

Second, even when we confine ourselves to these fact-stating uses of language, it seems absurd to say that words signify ideas. Don't we also need words to talk about *things*? J. S. Mill writes that "[w]hen I say, 'the sun is the cause of the day,' I do not mean that my idea of the sun causes or excites in me the idea of the day."[76] But this criticism misses the mark by assuming that if words *signify* ideas, they are about or *refer to* those ideas. Nothing could be further from the sense in which the moderns understand linguistic signification.[77]

Our final objection is more fundamental, and stems from the privacy of the ideas and acts the moderns think words are used to signify. If my mental life is never open to inspection by others, how can I use words to reveal it to them? This is really two points: (1) because ideas are, as Locke says, "all within [a man's] own Breast, invisible, and hidden from others,"[78] there is no way to check whether we are speaking the same language or merely using homonyms. Moreover, (2) it is impossible to ever get the conventions necessary for communication off the ground, because there is no way for us to agree to use a word as a sign of a given idea. To do *that*, we would have to have some other convention already in place. Although these criticisms are most often associated with Wittgenstein and Frege, they were first pressed by John Sergeant, the maverick Catholic priest who in 1694 published a lengthy critique of Locke's *Essay*. Sergeant writes,

> Our words are *ad placitum*, and have no *Natural* Connexion with the Things they signifie, but are order'd to express them by the *Agreement* of Mankind: Therefore what's signified by them, must be *fore-known* to that Agreement. But the *Ideas* . . . we have, cannot be *fore-known* to this Agreement, since they could not be at all known, (*being in the Mind*,) but by the *Words*; which, not being yet agreed on, can make known, or signifie, nothing.[79]

How can we, as a group, decide that 'tree' will signify the idea of a tree, when we have no public means of pointing to the idea?

To see Locke's answer, we must note that Sergeant assumes that it is *only* by means of words that make our ideas known to others. This is the point Locke will deny. On his view, language first gets going by means of ostensive definition (and indeed any word for a simple idea can *only* be defined by ostension). One says 'tree,' points to a tree, and hopes the other person cottons on. There is no guarantee that she will, but given our

very similar cognitive and perceptual equipment, plus a good deal of trial and error, it seems to work. Thus, ostensive definition is necessary at the start of language. It also provides an answer to (2): how can I check that my interlocutor understands me? Only by using other words and ultimately, in the limiting case, "*by presenting to his Senses that Subject, which may produce it in his Mind,* and mak[ing] him actually have the *Idea,* the word stands for."[80] This move is hardly uncontroversial, of course; philosophers from Augustine to Wittgenstein have argued that ostensive definition, used in this way, is problematic. Answering their critiques would take us too far afield, but it does seem to me that the difficulties have been exaggerated.

It is worth pausing to examine Sergeant's own positive view, because he represents one of the few dissenting voices to what I have represented as the dominant view among the moderns. Sergeant rejects the way of ideas in part because he thinks our speech is directly about real things; for him, words reach right out to the world, as it were. But this is not to say that he anticipates Frege or Kripke. On the contrary, his claim is founded on the puzzling doctrine that numerically the same thing can have what Sergeant calls two "manners of existence": in the body, materially, and in the mind, immaterially. When I think of a cathedral, the cathedral itself, on Sergeant's view, exists in my mind. Whether this is a clever anticipation of John McDowell's doctrine of object-dependent thought or a hopeless muddle, or both, is an open question.[81]

5. Definitions

With this sketch of the dominant modern conception of signification in place, we can begin to look at some of its consequences. Undoubtedly the modern philosopher to make the most hay of the nature of signification is Locke. Locke did not set out to include in the *Essay* a book on language. Having finished his account of the origin of ideas in book 2, Locke had intended to proceed straightaway to a discussion of knowledge. But he found that "there is so close a connexion between *Ideas* and *Words*" that he was unable to treat knowledge until he had first considered the nature of language.[82] By far the largest portion of book 3 is negative; it takes its place in Locke's project as "under-labourer" for the sciences, clearing away the rubbish of Scholasticism.

Nowhere is this more evident than in his chapter on the abuse of words. The fifth abuse Locke discusses is "*setting them in the place of Things, which they do or can by no means signify.*"[83] Although words like 'man' or 'gold'

> signify nothing truly but a complex *Idea* of Properties, united together in one sort of Substances: Yet there is scarce any Body in the use of these Words, but often supposes each of those names to stand for a thing having the real Essence, on which those properties depend.[84]

It is natural, though quite mistaken, for us to assume that our words directly reach out to things. Locke recognizes that his readers will likely be chagrinned to learn that they can at best use words to signify their own thoughts.[85] When I say "nitrate fertilizers are explosive," I don't want simply to say that the idea of explosivity is contained in my idea of nitrate fertilizers; I "tacitly suppose," to use Locke's phrase, that I am referring to the stuff itself, the fertilizer, and saying that its real essence produces its explosive powers.[86] But this supposition is always false.

Recall that a completed Aristotelian science would be a network of definitions and other propositions connected by syllogisms. These definitions have the status of first principles, starting points from which the rest of the network is derived. If Locke is right, however, any definition is nothing but a report of the contents of one's own ideas. Why? Simply because the words used in those definitions can, like all words, only signify mental contents.[87]

On Locke's view, an awareness of this fact about language would put a stop to the vast majority of disputes, in philosophy and out of it. Is a bat a bird or not? Is this *really* gold or isn't it? Is this a particularly hirsute baby or a monster?[88] The only thing you can do is consult your abstract idea of these kinds, what Locke calls their nominal essences, and figure it out. There just is no further fact of the matter.[89] The tendency to think that these questions are important – that answering them would tell us something, not about our own ideas, but about the world – is just another unhappy result of the tendency to think that words signify the things themselves.

In addition to these nominal essences, Locke acknowledges that there are real essences: "the real internal, but generally in Substances, unknown Constitution of Things, whereon their discoverable Qualities depend."[90] It is a serious mistake to think of Lockean real essences as substitutes for Aristotelian essences, suitably rigged up for the mechanical philosophy. Among other things, Aristotelian essences are supposed to be what they are regardless of anyone's conceptual activity.[91] A man is a man and not a duck no matter how anyone conceives of the two kinds. Now, at the level of tokens, this is quite true of a Lockean real essence: there is some hidden arrangement of corpuscles that gives this particular thing we call a duck its observable qualities. But it is not true at the level of types, or kinds: there is nothing out there that really marks off one such arrangement from another. As Locke says, "*Essence*, even in this [i.e. the real] sense, *relates to a sort*, and supposes a *Species*."[92] Even if all our epistemic limitations were lifted and we had a God's-eye view of the corpuscles of a body, we would still be deploying our abstract idea *duck* when we asked after the real essence of this species. What is more important, there is no reason to suppose that for each set of properties we track with our nominal essences there corresponds a unique *real* essence.[93]

Here it is instructive to look at Leibniz's critique of Locke in the *New Essays*.[94] In response to Locke's assertion that words signify nothing but thoughts, Leibniz simply asserts that "things as well as ideas are indicated [*marquées*] by words."[95] Thus when Locke inveighs against the practice of putting words in the place of things they cannot signify, Leibniz replies that "it [is] obviously wrong to criticize this common usage."[96] Having simply rejected Locke's claims about the limits of the signification of words, Leibniz, as a result, turns a deaf ear to the strictures Locke would infer from them. What is more striking, Leibniz provides no account of how it could be that *things* are signified or indicated (*marquées*) by words.

On Locke's view, then, definitions are of words, not of things, and these definitions, even under epistemically idealized conditions, yield only the constituent ideas that we associate with the word. The limits of language are the limits of our ideas. Now, Locke thinks that recognizing this requires one to give up the Aristotelian project of natural philosophy as confused.[97] But of course it is open to the Aristotelian to simply identify a thing's essence with our idea of it, a trick we have seen Sergeant turn with his doctrine of "notions." Indeed, Locke sometimes presents his opponents' view as the claim that the essences of things *just are* our ideas.[98]

In a similar vein, Cartesians like Arnauld and Nicole, although abandoning the framework of Aristotelian hylomorphism, hold that some definitions of ideas capture

an eternal essence. 'Triangle,' on their view, can be given either a nominal definition, in which case it is merely stipulative,[99] or a real definition, which expresses the constituent parts of the idea we have agreed to signify by the term 'triangle.'[100] Real definitions, on their view, can be true or false, and require argument. Unlike nominal definitions, they cannot simply be assumed at the outset of a demonstration. It is no surprise, then, to find Cartesian critics of Spinoza's *Ethics* arguing that he begs the question by offering no argument for the definitions on which his system depends.[101]

It is hard to know, however, precisely what the Port-Royalians are asking for when they demand an argument for a purportedly real definition. Leibniz makes this much clearer when he says that a real definition must reveal the possibility of the thing defined.[102] When this is done *a priori*, a real definition of, for example, a triangle shows how the properties of a triangle can be combined without contradiction.[103] A real definition is also, for Leibniz, a causal definition, in the sense that it "contains the possible generation of the thing" (1989, 57).

This last remark signals yet another notion of definition in the modern period, one that also has Aristotelian roots. On this view, definitions should, as Hobbes puts it, capture the "cause and generation" of anything that has them. Hobbes here takes his cue from geometry, "the only science that it hath pleased God hitherto to bestow upon mankind."[104] The proper definition of a circle, for example, is the circumduction of a straight line in a plane.[105] Definitions should embody a kind of maker's knowledge, a recipe for bringing about the thing defined. Similarly, we find Spinoza claiming that definitions of created things must include their proximate causes.[106]

6. Reasoning and universals

The moderns as a whole are united, as we have seen, in the view that the role of language is to make publicly available the private goings-on of one's mind. Although this is Hobbes's official view, he also suggests a quite different picture according to which some reasoning can be done only with words. This violates the typical two-tiered structure, with mental discourse serving as the primary bearer of intentionality and meaning, and verbal, whether written or spoken, imperfectly mirroring thought. Hobbes makes the radical suggestion that language use might be in some way constitutive of reasoning itself.[107]

Reasoning, for Hobbes, is nothing more or less than "*reckoning*, that is, adding and subtracting, of the consequences of general names agreed upon for the *marking* and *signifying* of our thoughts."[108] On Hobbes's computational theory of the mind, reasoning proceeds by quite literally adding and subtracting either words or concepts. But, as we shall see, Hobbes thinks that only words are universal. That is, as far as the subject's interior life goes, only particulars are the objects of thought. Note that this is quite different from a view that says that ideas themselves can be universal, or at least that their immediate intentional objects can be general in the sense that they pick out a class of particulars. On Hobbes's view, only words themselves can range over particulars.

This feature of Hobbes's view puts him squarely in the bull's-eye of Descartes and his fellow travelers. In an admittedly odd objection to Descartes's wax argument, Hobbes writes,

> Now, what shall we say if it turns out that reasoning is simply the joining together and linking of names or labels by means of the verb "is"? It would follow that

the inferences in our reasoning tell us nothing at all about the natures of things, but merely tell us about the labels applied to them; that is, all we can infer is whether or not we are combining the names of things in accordance with the arbitrary conventions which we have laid down in respect of their meaning.[109]

Descartes finds this so silly he cannot believe anyone even entertained it. For Descartes, reasoning is "not a linking of names but of the things that are signified by the names."[110] Like Leibniz in his objection to Locke, Descartes does not bother to explain how *things* can be joined together. Obviously, he does not have in mind physically connecting things, as if building an Erector set were reasoning; at most he can mean that the things themselves are linked in the sense that our ideas represent them, and the ideas are joined in a proposition or judgment. As Descartes goes on to point out, it is not clear where precisely Hobbes disagrees: after all, Hobbes himself holds that phantasms or ideas represent bodies and their accidents, and that our ideas are signified by words. To this extent, then, reasoning can indeed be about things.

This passage of Hobbes's has often been taken to mean that he endorses a "Humpty-Dumpty" theory of meaning and truth. Hobbes's emphasis on the arbitrary nature of linguistic convention seems to indicate that what makes a proposition true is simply whether it accords with these conventions. Thus, Leibniz famously calls Hobbes a "super-nominalist," who believes that "the truth of things itself consists in names and what is more, that it depends on the human will, because truth allegedly depends on the definitions of terms, and definitions depend on the human will."[111]

We have already seen that Hobbesian definitions do not depend on the human will, in any interesting sense. So, Hobbes cannot consistently mean what Leibniz, Descartes, and the Port-Royalians think he means. Moreover, as Arnauld and Nicole point out, the claim that truth is arbitrary does not follow from the fact that the imposition of words is arbitrary. Once the signification of the relevant words is settled, whether a proposition is true or not is as objective as anything could be.

What, then, is Hobbes getting at it in his objection to Descartes? To answer this question, we need to look at the consequence Hobbes infers:

If this is so, as may well be the case, reasoning will depend on names, names will depend on the imagination, and imagination will depend (as I believe it does) merely on the motions of our bodily organs; and so the mind will be nothing more than motion occurring in various parts of an organic body.[112]

The real point of Hobbes's claim that reasoning depends on names, which in turn depend on imagination, is to counter Descartes's dualism. As we have seen, Descartes takes reason, the universal instrument, to be one of the features that separates man not just from other animals but from *any* corporeal being. Nothing can at once reason and be merely corporeal. Hobbes's objection is a direct challenge to this view: Hobbes promises to explain the phenomena of reasoning purely through words and imagination. The imagination, which includes memory, is conceded by all parties to the debate to be purely corporeal. Thus, no Cartesian intellect need apply.[113]

Seen in this materialist light, Hobbes's position comes into focus. A true proposition, he thinks, is one in which the predicate contains or comprehends its subject – for example 'mammal' contains or encompasses 'whale.'[114] This is a purely extensional theory of truth: what makes "whales are mammals" true is the fact that the word 'mammals' has

been applied to a certain class of beings, and 'whale' has been applied to a subset of this class. In one sense, why *these* names (and not others) have been applied has no good answer: we could just as well have spoken of 'shwales' and 'shmammals.' In another, it has a perfectly good answer: we have applied these names in such a way as to track the resemblances and differences in the phantasms caused by these things.[115] It is then misleading to say that, for Hobbes, reasoning about kinds consists in the mere manipulation of words. And it is this further story – one spelled out in the vocabulary of phantasms and objective resemblances – that prevents his view from falling into supernominalism.

7. Propositions

If the questions of definition and reasoning occasioned debate in the modern period, the question of propositions generated something like consensus. The intriguing issue is just what the object of this consensus amounts to. As we shall see, in its baldest statements, it seems vulnerable to a fairly obvious objection. Although the moderns as a whole have a good answer to one question about propositions, namely what elevates a mere string of words to the status of a proposition, this answer seems to commit them to a wildly implausible view of the attitudes (e.g. belief, dissent, supposition, doubt) we adopt toward them.

One useful way into the question of propositions is afforded by an influential objection to Hobbes's view. Hobbes holds that the copula is superfluous: there might be "some nations" that have no word that corresponds to our word 'is.'[116] Peter Geach writes, "we might very well object that it [the copula] is necessary, because a pair of names is not a proposition but a list."[117] 'Whales mammals,' for example, does not assert anything, nor does it admit of a truth value. Add the copula ('whales are mammals') and you get something with both these features. So, the copula, for Geach, is an essential element in any proposition: it unites the subject and predicate into a complex that admits of a truth value.

But Hobbes in fact endorses Geach's point: Hobbes thinks that a proposition "*is a speech consisting of two names copulated, by which he that speaketh signifies he conceives the latter name to be the name of the same thing whereof the former is the name.*"[118] What, then, is going on? Hobbes, I suggest, is pointing out that there is nothing essential in the grammatical form: we might indicate how we conceive of the names in question by our tone of voice rather than by 'is,' 'est,' or what have you. Hobbes and Geach agree that the job of the copula must get done; Hobbes simply denies that it needs to be done by a distinct syntactic unit.

This concern with what unites words or ideas in a proposition and distinguishes propositions from lists can be found as far back as Aristotle's *De interpretatione* (16a10–19) and runs right through the modern period. But where Hobbes focuses on names, and makes speech essential to the formation of a proposition, most of his fellow travelers take the more traditional line that there are purely mental, as well as verbal, propositions, and that the role of a verbal proposition is to mirror the mental proposition.

Thus, a more typical pronouncement is to be found in the Port-Royal *Logic*:

> [a]fter conceiving things by our ideas, we compare these ideas, and, finding that some belong together and others do not, we unite or separate them. This is called *affirming* or *denying*, and in general *judging* . . . [and] this judgment is also called a *proposition*.[119]

As with Hobbes, it is crucial that a judgment or proposition consists not merely of a pair of ideas or words but of these items combined or taken in a certain way. Similar pronouncements can be found in Locke.[120] 'Is' signifies not another idea but rather a mental act. To this extent, Locke departs from his blanket claim that all words signify ideas in the mind of the speaker. Some of them must signify mental acts.[121]

The problem with this dominant view is not hard to see. Take the proposition "[i]f a creature's will can obstruct the absolute will of God, God is not omnipotent." The antecedent here is itself a proposition: a creature's will can obstruct the absolute will of God. And yet when I assert the conditional, I am not, of course, asserting the antecedent.[122] Nor am I asserting the consequent, namely that God is not omnipotent. And yet each is itself a proposition, which entails that I find that the constituent ideas agree or disagree. To even think "God is not omnipotent" is, it seems, to assent to this proposition: I have to *find* that the ideas *God* and *omnipotent* disagree. The very nature of a judgment or a proposition, it seems, precludes any attitude toward that proposition other than assent. And this is absurd.[123]

It is not as if the moderns are somehow blinkered to the obvious fact that not every proposition we entertain, whether in the context of a conditional or not, is not an object of assent. In fact, the previous example is drawn from the Port-Royal *Logic* itself.[124] But providing for the unity of the proposition as the moderns do seemingly makes it impossible to account for propositional attitudes.

What, then, are we to conclude? Could the Port-Royal logicians and Locke have been so inconsistent as to insist on the possibility of entertaining a proposition without assenting to it and in the same breath offering an analysis that makes this flatly impossible? One possible move is to claim that the subpropositional use of 'is' is not equivalent to assertion. That is, an affirmation is not necessarily an assertion. There are two acts that need to be performed: a union of subject and predicate, and then the adoption of an attitude toward the resulting proposition. The skeptic can argue that such a reading is precluded by the Port-Royalians' talk of *finding* that the subject and predicate agree or disagree. But if *finding* entails assent, it has an even more dire consequence: one cannot find that two ideas agree, for example, when those ideas *do not* agree. 'Find,' like 'see,' is a success term. Taken at face value, then, the Port-Royalian view makes it impossible not only to entertain a proposition without assenting to it but also to assent to a proposition that it is not in fact true. Considerations of charity must be played off textual considerations to achieve some kind of equilibrium, and it is plausible to read the Port-Royalians, and Locke, as holding that the affirmation involved in constructing any proposition is only provisional, and can be canceled by further acts of the mind.[125]

Not all the moderns agree that a judgment or proposition requires a further act of the mind beyond that of conceiving of an idea alone. Some think that to entertain the proposition that *x* is *F*, for example, is just to have a single idea. In other words, the traditional distinction between conceiving and judging is collapsed. This doctrine has its source in Descartes and comes to fruition, if one wants to call it that, in Spinoza. It lives on in the next century in the work of Hume.[126]

Here again we can begin with a contemporary objection. Descartes is often painted as an epistemic voluntarist, that is someone who thinks that the will is always free to affirm or deny any proposition at all.[127] Judgment, for Descartes, is an act of the will, and so, the objection goes, he thinks that the mind can either affirm or deny any

proposition. This is obviously false: I cannot will myself to disbelieve 2 + 2 = 4, no matter how hard I try.

That the objection is wrongheaded can be seen from Descartes's analysis of will:

> [T]he will . . . consists simply in the fact that when the intellect puts something forward for affirmation or denial or for pursuit or avoidance, our inclinations are such that we do not feel we are determined *by any external force*.[128]

This leaves open that we can be determined by an *internal* force, namely the light of reason. The more clearly I understand a true proposition like 2 + 2 = 4, the more I find affirming it irresistible, and the more free my will is in affirming it.

Spinoza takes this as his starting point in analyzing propositions. For him, what most moderns take to be distinct acts – forming an idea and then combining it with others to generate a proposition – are conflated. Any act of the will just is an affirmation or negation, and these are identical to the ideas most moderns would take as their objects. His argument is roughly as follows: because conception and affirmation (or negation) are always, and necessarily, found together, there can be no real distinction between them. As Spinoza writes, "[t]here is in the mind no volition, that is, affirmation and negation, except that which an idea, insofar as it is an idea, involves."[129] Take the claim (P) that the three angles of a triangle are equal to two right angles. Now, we cannot affirm (P) without having the idea of a triangle. Conversely, and more controversially, we cannot, Spinoza thinks, have the idea of a triangle without affirming (P). So, affirming (P) "belongs to the essence of the idea of a triangle."

Although not directly an influence on later philosophers, like Hume, who also reduce judgment to conception, Spinoza's position represents a novel and radical departure from the Aristotelian tradition. But if the traditional view faces the problem of propositional attitudes, Spinoza's is undone by it. However plausible as an account of *a priori* necessary propositions, Spinoza's view cannot make sense of any other.

8. Definite descriptions and the limits of thought

Syncategorematic terms – words like 'is,' 'of,' 'and,' and 'but' – are crucial not just in constructing propositions but in expressing their connection. Locke gives an astute analysis of 'but,' tracing its different roles in indicating postures that the mind adopts toward propositions. As we have seen, it is not clear whether the tradition in which Locke stands can offer an analysis of the proposition consistent with these postures.

What concerns us in this section, however, is the role of syncategoremata in constructing what contemporary philosophers call definite descriptions. Syncategoremata are subpropositional elements that are nevertheless not just noun, or noun-adjective, combinations. 'That tapir over there' includes not just a sign of the idea of a tapir but words indicating further mental acts. As we shall see, they play an indispensable role in extending the bounds of sense.[130]

The best starting point is the exchange between Hobbes and Descartes. Hobbes argues that we have no ideas of God or substance; these are established by inference but not given in any idea.[131] Substance, for example, "is something that is established solely by reasoning; it is not something that is conceived, or that presents any idea to us."[132] The Port-Royalians, endorsing what I have called the default modern view of signification,

draw the obvious conclusion: "if we had no idea of God, in uttering the name 'God' we would conceive only these three letters, 'G,' 'o,' 'd.' "[133] Using language to communicate requires that we have a single idea for each categorematic word we utter.

What has Hobbes to say for himself? To establish that *x* exists by means of inference or reasoning obviously requires that I first have some way to think and talk about *x*. Moreover, it is hard to see how Hobbes could deny that we "conceive" of substance and yet claim that we know it exists. For a coherent development of Hobbes's insights in his exchange with Descartes, we have to look to Locke.

Consider Locke's own analysis of substance. Construed as an ultimate substratum or underpinning of qualities, substance is not a possible object of experience.[134] It is not a macroscopic quality that can cause ideas in us, but the cushion in which the pins of qualities stick. Thus, Locke's own index entry for "substance" reads "S. no idea of it."[135] At the same time, Locke clearly thinks that we *do*, in some sense, have an idea of substance; otherwise the word would be nonsense. Locke's ambivalence can be accounted for by seeing the difference between thinking of *x* in virtue of having a single idea that represents *x* and in virtue of having a string of ideas and acts that jointly represent *x*. Only in the latter sense can we have an "idea" of substance. "That which underlies and supports qualities" does not signify a single idea in the mind of the speaker but rather a complex of ideas and mental acts, much as a proposition must include words that signify ideas and the mental act of combination or separation.[136] "Substance" is an abbreviated definite description.

Bertrand Russell takes definite descriptions to be the only means by which an empiricist avoids idealism.[137] In the same way, Locke uses them to extend the limits of thought beyond ideas and even the objects they represent. By structuring ideas and mental acts in the right way, we can transcend the narrow limits imposed by the veil, or better, the window, of ideas. For the very same reason, Locke's use of descriptions makes him the target of later empiricists.

Although Berkeley ultimately goes on to endorse a substance view of the mind, he entertains in his notebooks a Humean picture, on which the mind is nothing more than an aggregate of ideas. Arguing against the Lockean view, Berkeley writes, "Say you the Mind is not the Perceptions. but that thing wch perceives. I answer you are abus'd by the words that & thing these are vague empty words wthout a meaning."[138] Here, Berkeley zeroes in on precisely the syncategorematic terms so vital to Lockean definite descriptions. The words 'that' and 'thing' are denied a meaning because they cannot be correlated with any ideas. Having taken over what he (mis)takes as Locke's philosophy of language, namely the view that all words signify ideas, Berkeley can accuse Locke of inconsistency: 'that' does not signify any idea at all (it is "empty" and "without a meaning").[139] But on Locke's real view, 'that' can nevertheless be significant, because it indicates an act of the mind.

The issue of definite descriptions has clear ramifications for later thinkers. One of the most striking features of Hume's emaciated empiricism is its refusal even to entertain Lockean definite descriptions as a means of thinking about that which is permanently hidden from experience. Might this not be a result of his view of the nature of the proposition, and his rejection of syncategorematic terms as signifying anything over and above one's ideas?

Because this topic is the most obvious link to the debates of the eighteenth century, it makes an appropriate place to end this sketch of philosophy of language in the seventeenth.

9. Conclusion

If this chapter licenses any lesson, it is that philosophy of language in the seventeenth century is a vast and lively battlefield, distinguished by skirmishes and sometimes routs. Its front lines extend to many of the core issues in metaphysics. And if the background assumptions that structure the debate are foreign to us, if it is fought on terrain we find difficult to map, that makes it all the more instructive. For throwing our own assumptions into stark relief is surely one of the ways in which the history of philosophy matters to philosophy.[140]

10. Further reading

The best place to start is Ian Hacking's classic *Why Does Language Matter to Philosophy?* (1975). In a lucid and accessible style, Hacking argues for some intriguing positions and makes the first sustained foray into the history of the philosophy of language, all the while keeping one eye on contemporary debates.

More recently, Michael Losonsky's *Linguistic Turns in Modern Philosophy* (2007a) covers much the same territory, though in a very different way. Losonsky's theme is the split between those approaches to language that treat it as a formal system and those that treat it as a practical tool for communication. Like Hacking, Losonsky begins in the seventeenth century and continues through the twentieth.

Finally, two special issues of journals are well worth reading. *Synthese* (1988), titled "Thought and Language in the Philosophy of the Enlightenment," contains a number of important pieces, particularly on Locke, Descartes, and Berkeley. And *Philosophia* (2009) includes the proceedings of a 2008 conference titled "Meaning and Modern Empiricism."

Notes

1 *Leviathan* (hereafter, "Lev"), I.v: 36–7. References to Lev are in the following form: part.chapter: page number in Hobbes (1839–45), vol. 3.

2 It is important not to be misled by the moderns' wide use of "name." This encompasses not just what we think of as proper names but nearly any noun or noun-adjective complex.

3 Note that, in the typical case, the mind uses, rather than thinks of, universals. On Aquinas's view, for example, the intelligible species is not itself the object of thought. It can, of course, become so, when the mind reflects on its own activity. But for the most part the intellect uses the abstracted species to think of individuals, though not *qua* individuals.

4 This is Locke's official position. His argument for God's existence in *Essay* 4.10, however, creates problems for this agnosticism. For more on this, see Downing (2007). References to Locke's *Essay* are to Locke (1975) and are in the following form: book.chapter.section: page number, if applicable.

5 The connection between universality and immateriality runs throughout many of the early moderns. For example, at least early in his career, Gassendi argued that, being material, our minds cannot entertain genuine universals. For more on this, see LoLordo (2007: 234f.)

6 In this opening section, I run roughshod over many differences among the moderns; these will emerge in the following sections.

7 I do not wish to underestimate the degree to which Aristotelianism is heterogeneous. It is misleading, though extremely convenient, to speak of "the" Aristotelian view. Many views we think of as distinctive of the early modern period were prefigured in the tremendous array of positions flying under the banner of Aristotelianism. Nevertheless, this particular "ism" does point to a family of views that have some common commitments.

8 1629 Letter to Mersenne (CSM III 10f). References are to Descartes (1984) and in the following form: volume, page number.

9 For another example, see the Port-Royal *Logic* I.11: 58f. References are to part, chapter, and page number in Arnauld and Nicole (1996).

10 "Idol" is the standard translation for Bacon's *idola*; Michael Silverthorne (in Bacon 2000) makes a good case for translating it as "illusion," and indeed this seems to be how the English cognate of the word was understood at the time. Hobbes, for example, writes that demons are "idols or phantasms of the brain, without any real nature of their own" (Lev IV.44: 605.)

11 *The New Organon* I.xxxviii in Bacon (2000: 40).

12 See Hobbes, Lev I.i: 3.

13 As Galileo puts it in *The Assayer*, "[j]ust because we have given special names to these qualities, different from the names we have given to the primary and real properties, we are tempted into believing that the former really and truly exist as well as the latter" (in Matthews 1989: 57).

14 Spinoza (2002: 24); see *Theological-Political Treatise* (2002: 505) for the claim that words acquire meaning through their use. In an intriguing article, David Savan (1973) argues that Spinoza's views on language entail that the true philosophy is unstable: given Spinoza's view that words are a part of the imagination, Savan claims, they cannot mirror the intellect, as truth requires. But see the rejoinder by G.H.R. Parkinson in the same volume.

15 For more on this, see esp. Dawson (2007), though I think she tends to exaggerate the moderns' anxiety about these issues.

16 Lev I.4: 25.

17 Port-Royal *Logic* I.11: 58.

18 For some Scholastics, such as Aquinas, "definition" means only the definiens, not the entire proposition. I ignore this complication here.

19 See Aristotle's *Posterior Analytics* and esp. Aquinas's commentary (1970).

20 See esp. Descartes's appendix to Fifth Replies, CSM II 271; see also *Rules for the Direction of the Mind*, CSM I 36, 51.

21 See esp. Nuchelmans (1998c: 133f.)

22 Glanvill (1665: 143).

23 *New Essays Concerning Human Understanding* (hereafter, "NE") III.xvii: 478. Page numbers refer to the Akademie edition (Leibniz 1990) and are followed by Bennett and Remnant (Leibniz 1996). Translations of NE are those of Bennett and Remnant unless noted. See also Nuchelmans (1998c: 133f.)

24 NE III.x.xvii: 478.

25 It is also worth noting that the structure of a Scholastic textbook in logic – beginning with individual terms, then moving to propositions, to formal reasoning, and finally to general remarks about logical method – lives on in many modern works. This is explicit in the Port-Royal *Logic* and in Hobbes's logic, book I of his *De Corpore*; it is perhaps implicit in the structure of Locke's *Essay*. Book 1 aside, we can think of book 2 as focusing on the mental counterparts of categorematic words, book 3 on propositions, and book 4 on method.

26 CSM I 139–40.

27 John Cottingham calls this problem "the disappearing soul": if everything from nutrition to locomotion to pain avoidance can be explained mechanically, what is left for the Cartesian soul to do? See Cottingham (1992).

28 CSM I 140.

29 CSM I 140.

30 CSM III 303.

31 This is an intriguing point in Descartes's argument. Although the use of signs in the ways specified seems to be set up here as an indication of both reason and thought, the madman's speech "does not follow reason," and yet still counts as an indication of thought. That Descartes distinguishes between reason and thought is evident in the 1649 *Passions of the Soul*, Descartes's last work, where he says that beasts "have no reason, nor perhaps any thought" (CSM I 348). So, although language use is a sufficient condition for thought, it is not one of reason.

32 Compositionality as a criterion of languagehood becomes explicit in Berkeley: "[i]t is the articulation, combination, variety, copiousness, extensive and general use and easy application of signs . . . that constitute the true nature of language," *Alciphron* Dialogue IV, section 12, in Berkeley (1949–58, vol. 5: 157).

In taking language use to be the primary means of discerning reasoning (or at least thinking) beings from those that are not, Descartes is unusual in the period we are examining. The debate that ensues focuses squarely on the attribution of thought, whether the animal is a language user or not. See, for

example, Locke, *Essay* 2.11.5: 157–8. Locke locates the main difference between humans and animals in the ability to abstract, not in the possession of thought, ideas, or language. See also the exchange between Philalethes (Locke's spokesman) and Theophilus (who represents Leibniz's own views) in the latter's NE: 142–5.

33 CSM III 10; cf. Descartes's talk of true colors in the Third Meditation.

34 Earlier writers, such as Ramon Lull, hoped for such a language in part because it would enable proselytizers of the true religion to convince infidels more readily.

35 See Leibniz's "Preface to a Universal Characteristic" and "Samples of the Numerical Characteristic" in Leibniz (1989: 5–18). In a short dialogue from 1677, Leibniz (1969: 182–5) suggests that, whereas the characters of such a language, and indeed all languages, are arbitrarily chosen, the truths constructed out of them depend only on their relations to each other and to things. For discussion, see Losonsky (2007a: 57f.)

36 For more on this, see Eco (1997). Hans Aarsleff (1964) has made much of the Adamic thought of the period, even reading book 3 of Locke's *Essay* as a response. For a corrective, see Ian Hacking (1988). Although Aarsleff reads Leibniz as taking up the Adamic cause in his *New Essays*, there is little evidence for this. Indeed, Leibniz himself says of Boehme, "he neither understood himself, nor have others understood him" (quoted in Hacking 1988: 144).

37 NE III.ii: 278.

38 NE III.ii: 281.

39 *Pace* Aarsleff (1964). When Leibniz says that "there is something natural in the origin of words – something which reveals a relationship between things and the sounds and motions of the vocal organs" (NE III.ii: 283), he has in mind not just onomatopoeia but the psychological concomitants of making certain vocalizations. For example, Leibniz thinks *r* "naturally signifies a violent motion" (NE III.ii: 283) and hence comes to be used in words signifying such motion.

40 Or, more precisely, the Latin translation of this paragraph by Boethius. See Ashworth (1981, 300).

41 In Aristotle (1984, vol. 1: 25).

42 Locke, *Essay* 3.1.2: 402.

43 The extent to which this is true depends on each philosopher's conception of the origin of ideas. Descartes's God could in principle create a mind without one or more innate ideas; such a mind would be operating without a full stock of mental materials from which to form thoughts. Similarly, Locke holds that a person born blind will have no way of representing color, except perhaps indirectly.

44 Lev I.4: 19; cf. Locke, *Essay* 3.1

45 See Ashworth (1981; 1984). On Ashworth's reading, signification in the late Scholastic sense includes "aspects" of both sense and reference, though it is not to be identified with either. Ashworth argues that this sense of signification carries over into Locke; here we disagree.

46 Although this is controversial, I agree with Michael Jacovides's claim that Locke means "resemblance" literally; see Jacovides (1999).

47 CSM I 81. Note that the motions of the brain that signify light are not themselves perceived, even though they make us think of light. Descartes thus rejects the traditional requirement that the sign itself be perceivable. Descartes might have in mind the notion of formal signs, commonly deployed by Scholastics such as John Poinsot, according to which a sign need not itself be perceived (see Ashworth 1988). In this, Descartes has very few fellow travelers among the moderns; possible exceptions are the Cambridge Platonists, such as Ralph Cudworth. For more on this, see Slezak (2000) and Yolton (2000).

48 CSM I 82.

49 *Logic* I.4: 36.

50 This is the flip side of what is known as the disjunction problem in contemporary philosophy of mind.

51 *Essay* 3.1.2: 402. Cf. the Port-Royal *Logic*:

> On this topic we can generally say that words are distinct and articulated sounds that people have made into signs to indicate what takes place in the mind. Since what takes place in the mind consists in conceiving, judging, reasoning, and ordering, as we have already said, words function to indicate all these operations.
>
> (II.i: 74)

52 Correspondingly, our intentions as hearers or readers ought to be to interpret the words as their author intended. For more on this, and for criticism of the indicator reading of Locke, see Winkler (2009).

53 This is controversial. For different views, see Ashworth (1984) and Kretzmann (1968). For a defense, see chapter 2 of Ott (2004) and E. J. Lowe (2007), chapter 4.

54 *De Corpore* (henceforth "DC") I.ii.2: 14–15. References to DC are in the following form: part.chapter. section: page number in Hobbes (1839–45), vol.1.

55 DC I.ii.5: 17.

56 Trivially, one *could* set up a convention by which 'stone' signifies stones, namely by uttering the sound only when in the presence of stone. But this is not the purpose of language, according to Hobbes (or Locke, or the Port-Royalians, for that matter). In such a case, words would not be able to fulfill their function of unfolding one's mind to another.

57 See Lev I.4: 19–20:

> So that the first use of names, is to serve for *marks*, or *notes* of remembrance. Another is, when many use the same words, to signify, by their connexion and order, one to another, what they conceive, or think of each matter; and also what they desire, fear, or have any passion for. And for this use they are called *signs*.

Locke does not bother to distinguish between marks and signs in this way, even though he clearly thinks words have both uses.

58 If they construe the relationship between signs as causes and signs as indications as one of genus to species, the Port-Royalians can escape my charge of having conflated the two uses.

59 See esp. *Essay* 3.2.7–8: 407–8.

60 *Essay* 3.2.4: 406.

61 *Essay* 2.30.2: 372–3, my emphasis; see 4.11.12: 631.

62 For more on this, see Sally Ferguson (2001). Contemporary philosophers of mind have developed similar stories by replacing God with natural selection. These issues are very complicated; for doubts about reading Locke as a proponent of teleosemantics or any externalist theory of the meaning of ideas, see Ott (2012).

63 See, for example, *Essay* 2.32.14: 388.

64 DC I.ii.6: 17.

65 DC I.ii.4: 16.

66 See Watkins (1973: 102). Watkins claims that Hobbes says nothing about the naming relation because he cannot accommodate it within his causal psychology.

67 DC I.ii.5: 17.

68 *Essay* 3.7.1: 471.

69 "The use then of Words, is to be sensible Marks of *Ideas*; and the *Ideas* they stand for, are their proper and immediate Signification" (*Essay* 3.2.1: 405); "[W]ords, as they are used by Men, can properly and immediately signify nothing but *Ideas*, that are in the Mind of the Speaker" (3.2.4: 406). But Locke often leaves off the restriction to primary or immediate signification; for example, he writes, "[words'] signification [in a man's use of them] . . . is limited to his *Ideas*, and they can be Signs of nothing else" (3.2.8: 408).

70 Once again, I should note that this is controversial. For criticism of my view, see Losonsky (2007b).

71 Losonsky (2007b) rather puzzlingly lumps my view in with Hacking's. Because I do not think that Lockean signification is sense, reference, or any combination thereof, Losonsky claims that I deny that Locke has a theory of meaning. This is trivially true if one means by "a theory of meaning" a *Fregean* theory of meaning, that is one that explains the sense and reference of words. It is false if one simply means "a theory that purports to explain how words function in communication."

72 *Logic* I.6: 39–40. Nuchelmans (1998a) argues that Leibniz employs a similar distinction.

73 By "fact-stating," I mean something broader than the term strictly implies, to include not just declarative statements but questions, conditionals, and so on. The line between fact-stating and non-fact-stating uses is a fluid one.

74 See, for example, *Philosophical Commentaries*, section 720; introduction to the *Principles*, section 19; *Alciphron* VII.5: 292.

75 See DC I.iii.1: 29. Hobbes and Descartes are thinking here of things like 'ouch' or perhaps profanity. Obviously, a word like 'joy,' as a sign, indicates an idea of joy, but it need not, as my own present experience attests, indicate that the person using it is experiencing joy at that moment.

76 Mill (1867: 15). In 1694, John Sergeant (1984: 33–5) made a similar criticism.

77 Thus Alston (1964) is wrong to call this sort of view "linguistic idealism."

78 *Essay* 3.2.1: 405.

79 Sergeant (1984: 34).

80 *Essay* 3.11.14: 515.

81 For amusing critiques of "Mr. J. S." on this point, see Locke's letter to Stillingfleet (1812, vol. 4: 390–1) and the anonymous pamphlet *A Dialogue Between Mr Merriman, and Dr Chymist: Concerning Sergents Paradoxes, in His New Method to Science, and His Solid Philosophy* (London, 1698).

82 *Essay* 2.33.19: 401.

83 *Essay* 3.10.17: 499.

84 *Essay* 3.10.18: 500. Note that Locke, as elsewhere in book 3 and throughout the *Essay*, does not include the limitation to primary or immediate signification. This is another reason to deny that secondary signification, if Locke believes in such a thing, is a new category, irreducible to primary signification.

85 See Winkler (2009).

86 See *Essay* 3.10.17–18: 500, where Locke uses the examples of gold and malleability.

87 Cf. Hobbes, DC I.v.7: 60, where Hobbes argues that it is false to say that "*the definition is the essence of the thing*. . . . For definition is not the essence of anything but a speech signifying what we conceive of the essence thereof."

88 For bats and birds, see *Essay* 3.11.7: 511; for the baby, see 3.6.26: 452–4.

89 I mean, no fact of the matter beyond the contents of those ideas. Now, if our abstract ideas captured Aristotelian real essences, then in an indirect way the world would be settling these questions.

90 *Essay* 3.3.15: 417.

91 These other things include acting as migration barriers: once a thing exists with a certain essence, it cannot then change that essence without being destroyed. On Locke's view, there are no such barriers in nature.

92 *Essay* 3.6.6: 442.

93 *Essay* 3.6.8: 443–4; 3.10.20: 501–2.

94 Here, I shall not delve into the details of Leibniz's defense of the Aristotelian picture, except to the extent that it's directly relevant to the question of language. For more on this debate, see Jolley (1984), chapter 8.

95 NE III.ii: 287. I depart slightly from Bennett and Remnant's translation here.

96 NE III.x: 345.

97 This is the main point of *Essay* 3.10 and, arguably, 3.6.

98 Against this permutation of the Aristotelian view, Locke argues that, if our ideas of substances just were their real essences, we would be able deduce all their other properties. See 3.10.18: 500 and 3.10.21: 502. It is not clear how effective this is, because both Leibniz and Sergeant point out that it is no part of the opposing position that our grasp of these essences is complete.

99 Nominal definitions can be individually stipulative, as when I say that 'mongfy' is to mean 'square,' or collectively so, as when a convention is in place that associates a word with a given idea. What I am calling individually stipulative definitions cannot be challenged and are neither true nor false; ascertaining the truth of a collectively stipulated definition requires looking to the linguistic practices of one's community.

100 See *Logic* II.12–14: 111–123.

101 See, for example, Pierre-Sylvain Régis, *Refutation de l'opinion de Spinosa* in Régis (1996) (first published 1704).

102 See *Discourse on Metaphysics*, section 24, in Leibniz (1989: 57).

103 This is the core of Leibniz's objection to Descartes's ontological argument for the existence of God. That argument begins with the definition of God and immediately infers His existence, from the fact that He is a perfect being. For Leibniz, however, one cannot simply assume that just because one knows the meaning of the word 'God' that one has in fact secured a real definition of God. One must prove that the constituent ideas – here, the ideas of God's attributes – are logically consistent. Only by doing so can one prove that God is even a *possible* being, let alone actual and necessary. See Leibniz's letter to Countess Elizabeth (1989: 238f.)

104 Lev I.4: 23–4.

105 See DC VI.13.

106 *Treatise on the Emendation of the Intellect* in Spinoza (2002: 26).

107 At least where general terms are concerned; Pettit (2008) goes much further and argues that, for Hobbes, language use is *constitutive* of thought. That this claim is mistaken will emerge as we go. Although Hobbes thinks reasoning about universals requires language – because universals are names – he does not think that all thought (or even all reasoning) concerns universals.

108 Lev I.5: 30.

109 Third Objections in CSM II 125.

110 Third Replies in CSM II 126.

111 "Preface to an Edition of Nizolius" (1670), in Leibniz (1969: 128). For discussion, see Watkins (1973).

112 Third Objections, CSM II 126.

113 Similar concerns prompt Locke's dismantling of the Sixth Meditation argument for the intellect: the intellect is supposed to be immaterial, and so allowing for it would be inconsistent with Locke's official agnosticism about the ultimate nature of the mind. See *Essay* 2.29.13–14: 368.

114 See DC I.iii.7. Note that Leibniz inverts this; for Leibniz, a true proposition is one in which the (concept of the) subject contains the (concept of the) predicate. See "Primary Truths" (in Leibniz 1989: 30–4). The difference between Hobbes and Leibniz here can be accounted for, I suspect, by noticing that Hobbes's definition of a true proposition is extensional, whereas Leibniz's is intentional. That is, Leibniz is worried about the relations between concepts, whereas Hobbes is worried about the extensions of the subject and predicate.

115 See esp. DC I.iii.3: 31 and DC I.ii.9: 20.

116 DC I.iii.2: 31.

117 Geach (1980: 60).

118 DC I.iii.2: 30.

119 *Logic* II.3: 82.

120 See esp. *Essay* 3.7. Note that Locke does not use "judgment" to refer to the act of the mind by which ideas are united in a mental proposition, but rather to a propositional attitude falling short of assent but nevertheless with some presumption of positive epistemic status (4.18.17: 685).

121 This point provides indirect support for the indicator reading; the copula, if it is doing its job, cannot be a referring term, nor can it have Ashworthian "aspects" of both sense and reference while being reducible to neither.

122 The problem of conditionals vexed many of the most acute thinkers of the era. Leibniz wanted to reduce all conditional judgments to categoricals: thus, you can read "if something is a whale, it is a mammal" as "all whales are mammals." This is a popular strategy in the period, also deployed by Arnold Geulincx. For more on this, see Nuchelmans (1998b: 123f.) But it is hard to believe that all conditionals are reducible to categorical claims.

123 For another statement of this argument, see Buroker's introduction to Arnauld and Nicole (1996).

124 *Logic* II.9: 100.

125 I experiment with different ways to accommodate a distinction between proposition and attitude in Locke in chapter 2 of Ott (2004). David Owen (2007) makes a powerful argument that none of these will work. This issue strikes me, though perhaps no one else, as an open question.

126 See Hume (2000), book I, part III, section 7, paragraph 5.

127 By "free" here I mean that the mind is able to judge otherwise than it in fact does.

128 The Fourth Meditation in CSM II 40; my emphasis.

129 *Ethics*, part II, proposition 49 in Spinoza (2002: 272).

130 Here I mean "sense" as opposed to nonsense, not *Sinn*.

131 Hobbes, of course, takes ideas to be images, which Descartes and the Port-Royalians deny. But this disagreement is orthogonal to the issue I am examining here.

132 CSM II 130.

133 *Logic* I.i: 27.

134 This is controversial. Although Locke uses "substance" in many ways, one of these is substratum, which I believe means the ultimate particular in which qualities inhere. I thus endorse the pin-cushion reading of Locke, in opposition to, for example, Michal Ayers (1991).

135 In Locke (1975: 745).

136 Cf. The Port-Royal *Logic*'s treatment of descriptions, which they treat as "less exact" definitions. See *Logic* II.16: 126.

137 See Russell (1912: 46f.)

138 *Philosophical Commentaries*, section 581.

139 In the *Commentaries*, Berkeley does eventually acknowledge that Lockean particles signify acts instead of ideas (section 667). This realization is no doubt an important force in the development of Berkeley's doctrine of notions. But throughout his published works, he mischaracterizes Locke as holding that all words signify ideas.

140 I am indebted to Antonia LoLordo for helpful comments.

Bibliography

Aarsleff, Hans. 1964. "Leibniz on Locke on Language." *American Philosophical Quarterly* 1: 165–88.

Alston, William. 1964. *The Philosophy of Language*. Englewood Cliffs, NJ: Prentice Hall.

Anonymous. 1698. *A Dialogue Between Mr Merriman, and Dr Chymist: Concerning Sergents Paradoxes, in His New Method to Science, and His Solid Philosophy*. London: n.p.

Aquinas, Thomas. 1970. *Commentary on the Posterior Analytics*. Trans. by F.R. Larcher. New York: Magi Books.

Aristotle. 1984. *The Complete Works of Aristotle*. 2 vols. Ed. by Jonathan Barnes. Princeton, NJ: Princeton University Press.

Arnauld, Antoine and Pierre Nicole. 1970. *La Logique, ou L'art de Penser*. Paris: Flammarion.

———. 1996. *Logic or the Art of Thinking*. Trans. and ed. by Jill Vance Buroker. Cambridge: Cambridge University Press.

Ashworth, E. J. 1981. "Do Words Signify Ideas or Things?" *Journal of the History of Philosophy* 19: 299–326.

———. 1984. "Locke on Language." *Canadian Journal of Philosophy* 14: 45–73.

———. 1988. "The Historical Origins of John Poinsot's *Treatise on Signs*." *Semiotica* 69: 129–47.

———. 1990. "Domingo de Soto and the Doctrine of Signs." In *De Ortu Grammaticae*. Ed. by G.L. Bursill-Hall, Sten Ebbesen, and Konrad Koerner. Philadelphia: John Benjamins.

Ayers, M.R. 1991. *Locke: Epistemology and Ontology*. London: Routledge.

Ayers, M.R. and Daniel Garber, eds. 1998. *The Cambridge History of Seventeenth-Century Philosophy*. 2 vols. Cambridge: Cambridge University Press.

Bacon, Francis. 2000. *The New Organon*. Ed. by L. Jardine and M. Silverthorne. Trans. by M. Silverthorne. Cambridge: Cambridge University Press.

Bennett, Jonathan. 1971. *Locke, Berkeley, Hume: Central Themes*. Oxford: Clarendon Press.

Berkeley, George. 1949–58. *The Works of George Berkeley*. Ed. by A. A. Luce and T. E. Jessop. 8 vols. London: Thomas Nelson.

Boyle, Robert. 1991. *Selected Philosophical Papers of Robert Boyle*. Ed. by M. A. Stewart. Indianapolis: Hackett.

Cottingham, John. 1992. "Cartesian Dualism." In *The Cambridge Companion to Descartes*. Ed. by J. Cottingham. Cambridge: Cambridge University Press.

Dawson, Hannah. 2007. *Locke, Language and Early-Modern Philosophy*. Cambridge: Cambridge University Press.

Descartes, René. 1984. *The Philosophical Writings of Descartes*. Vols. 1 and 2. Ed by John Cottingham, Robert Stoothoff, and Dugald Murdoch; Vol. 3. Ed. by Cottingham, Stoothoff, Murdoch, and Anthony Kenny. New York: Cambridge University Press.

Digby, Sir Kenelm. 1657. *Two Treatises: In the One of Which, the Nature of Bodies, in the Other the Nature of Mans Soule Is Looked Into: In Way of Discovery of the Immortality of Reasonable Soules*. Paris: Gilles Blaizot.

Downing, Lisa. 2007. "Locke's Ontology." In *The Cambridge Companion to Locke's Essay*. Ed. by Lex Newman. Cambridge: Cambridge University Press.

Dretske, Fred. 1990. "Misrepresentation." In *Mind and Cognition*. Ed. by William G. Lycan. Oxford: Blackwell.

Eco, Umberto. 1997. *The Search for the Perfect Language*. London: Blackwell.

Ferguson, Sally. 2001. "Lockian Teleosemantics." *Locke Studies* 1: 105–22.

Fodor, Jerry. 1984. "Semantics, Wisconsin Style." *Synthese* 59: 231–50.

Geach, Peter. 1980. *Reference and Generality*. Ithaca: Cornell University Press.

Glanvill, Joseph. 1665. *Scepsis Scientifica: Or, Confest Ignorance, the Way to Science; In An Essay of The Vanity of Dogmatizing, and Confident Opinion*. London: E. Cotes.

Hacking, Ian. 1975. *Why Does Language Matter to Philosophy?* Cambridge: Cambridge University Press.

———. 1988. "Locke, Leibniz, and Hans Aarsleff." *Synthese* 75 (2): 135–54.

Hobbes, Thomas. 1839–45. *The English Works of Thomas Hobbes*. Ed. by William Molesworth. 11 vols. London: Richards.

Hume, David. 2000. *A Treatise of Human Nature*. Ed. by D. F. Norton and M. Norton. Oxford: Oxford University Press.

Jacovides, Michael. 1999. "Locke's Resemblance Theses." *Philosophical Review* 108: 46–96.

Jesseph, Douglas. 1996. "Hobbes and the Method of Natural Science." In *The Cambridge Companion to Hobbes*. Ed. by T. Sorrell. Cambridge: Cambridge University Press.

Jolley, Nicholas. 1984. *Leibniz and Locke*. Oxford: Oxford University Press.

Kretzmann, Norman. 1968. "The Main Thesis of Locke's Semantic Theory." *Philosophical Review* 77: 175–96. Reprinted in *Locke on Human Understanding*. Ed. by I.C. Tipton. Oxford: Oxford University Press, 1975.

Leibniz, G. W. 1969. *Philosophical Papers and Letters*. Ed. by L. Loemker. Dordrecht: Reidel.

———. 1989. *Philosophical Essays*. Ed. by R. Ariew and D. Garber. Indianapolis: Hackett.

———. 1990. *Nouveaux Essais sur L'entendement*. Ed. by André Robinet and Heinrich Schepers. In *Philosophische Shriften*, vol. 6. Berlin: Akademie-Verlag.

———. 1996. *New Essays on Human Understanding*. Trans. and Ed. by Jonathan Bennett and Peter Remnant. Cambridge: Cambridge University Press.

Locke, John. 1812. *The Works of John Locke*. 11th ed. 10 vols. London: Thomas Tegg.

———. 1975. *An Essay Concerning Human Understanding*. Ed. by P.H. Nidditch. Oxford: Clarendon.

LoLordo, Antonia. 2007. *Pierre Gassendi and the Birth of Early Modern Philosophy*. Cambridge: Cambridge University Press.

Losonsky, Michael. 2007a. *Linguistic Turns in Modern Philosophy*. Cambridge: Cambridge University Press.

———. 2007b. "Language, Meaning, and Mind in Locke's Essay." In *The Cambridge Companion to Locke's Essay*. Ed. by Lex Newman. Cambridge: Cambridge University Press.

Lowe, E.J. 2007. *Locke*. London: Routledge.

Matthews, Michael R., ed. 1989. *The Scientific Background to Modern Philosophy*. Indianapolis: Hackett.

Mill, J.S. 1867. *A System of Logic*. New York: Harper.

Nuchelmans, Gabriel. 1980. *Late Scholastic and Humanist Theories of the Proposition*. New York: North Holland.

———. 1983. *Judgment and Proposition From Descartes to Kant*. New York: North Holland.

———. 1998a. "Logic in the Seventeenth Century." In Ayers and Garber (1998).

———. 1998b. "Proposition and Judgment." In Ayers and Garber (1998).

———. 1998c. "Deductive Reasoning." In Ayers and Garber (1998).

Ott, Walter. 2002. "Propositional Attitudes in Modern Philosophy." *Dialogue* 41: 1–18.

———. 2004. *Locke's Philosophy of Language*. Cambridge: Cambridge University Press.

———. 2012. "What Is Locke's Theory of Representation?" *British Journal for the History of Philosophy* 20, 6: 1077–1095.

Owen, David. 2007. "Locke on Judgment." In *The Cambridge Companion to Locke's Essay*. Ed. by Lex Newman. Cambridge: Cambridge University Press.

Pettit, Philip. 2008. *Made With Words*. Princeton, NJ: Princeton University Press.

Quine, W.V.O. 1969. *Ontological Relativity and Other Essays*. Columbia, NY: Columbia University Press.

Régis, Pierre-Sylvain. 1996. *L'usage de la raison et de la foi*. Paris: Fayard.

Russell, Bertrand. 1912. *The Problems of Philosophy*. Oxford: Oxford University Press.

Savan, David. 1973. "Spinoza and Language." In *Spinoza: A Collection of Critical Essays*. Ed. by Marjorie Grene. New York: Anchor.

Sergeant, John. 1984. *Solid Philosophy Asserted Against the Fancies of the Ideists*. New York: Garland.

Shields, Christopher. 2003. *Order in Multiplicity: Homonymy in the Philosophy of Aristotle*. Oxford: Oxford University Press.

Slezak, Peter. 2000. "Descartes' Startling Doctrine of the Reverse-Sign Relation." In *Descartes' Natural Philosophy*. Ed. by Stephen Gaukroger, John Schuster, and John Sutton. London: Routledge.

Spinoza, Baruch. 2002. *Complete Works*. Ed. by Michael Morgan. Indianapolis: Hackett.

Watkins, J.W.N. 1973. *Hobbes's System of Ideas*. London: Hutchinson.

Winkler, Kenneth P. 1989. *Berkeley: An Interpretation*. Oxford: Oxford University Press.

———. 2009. "Signification, Projection, Intention." *Philosophia* 37 (3): 477–501.

Yolton, John. 2000. "Response to My Fellow Symposiasts." In *Descartes' Natural Philosophy*. Ed. by Stephen Gaukroger, John Schuster, and John Sutton. London: Routledge.