# Deleuze’s Metaphysics of Structure in *Difference and Repetition*

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**I. Introduction**

This essay describes and evaluates the conception of mereological structure that underpins Deleuze’s account of ontogenesis in *Difference and Repetition*. A theory of mereology is a theory of composition: it asks what it is to be a part making a whole, what it is to be a whole collecting its parts; in short, in what the relation of *making* or *composing* consists. The *locus classicus* for modern mereology is the third of Husserl’s *Logical Investigations* (‘On the Theory of Wholes and Parts’), which deduces the definitions, axioms and principles governing the relation of parthood and associated notions, such as wholeness, separation, simplicity and complexity. My question is this: what happens to these notions when they are no longer the terms of a ‘calculus of individuals’ and, instead, become the terms of a differential calculus of individuation?

**II. The foundationalist paradigm: Husserl**

For Deleuze, the abolition of the category of the foundation (*effondement*) is the prerequisite for a rigorous conception of parthood and multiplicity. In order to make clear what the implications of *effondement* are in the context of mereology, I will begin with a description of Husserl’s foundationalist account of structure in the *Logical Investigations*. Husserl’s theory of composition provides a precise determination of the concept and function of the foundation in the framework of a theory of multiplicity and, hence, it points towards the terms, aims and methods of a non-foundationalist metaphysics of parts and wholes – to the means and ends of ungrounding.

Husserl’s definition of wholeness culminates in the conclusion that composition consists in more than the function of syncategorematic ands: a whole, being more than merely an aggregate, gathers its parts according to the necessity and essential lawfulness of its construction. With Aristotle, Husserl conceives of the unity of a whole in terms of the essential, whether functional or biological, and invariably formal or structural oneness of a definition. As Aristotle writes in the *Metaphysics*,

why are these materials a house? Because that which was the essence of a house is present. And why is this individual thing, or this body having this form, a man? Therefore what we seek is the cause [*αἴτιον*], i.e. the form [*εἶδος*], by reason of which the matter is some definite thing; and this is the substance of the thing [*οὐσία*].

*Met.* 1041b6-8

Composition, the law-bound arrangement of material parts, is tantamount to a formal structuring not from outside, as is the case with the coercion operative in aggregation, but either from above, from the formal being of the whole, or, what is the same, from below, from the depth of a founding part:

By a whole we understand a range of contents which are all covered *by a single foundation* without the help of further contents. The contents of such a range we call its parts. Talk of the *singleness of the foundation* [*Einheitlichkeit der Fundierung*] implies that *every content is foundationally connected, whether directly or indirectly, with every content*.

(Husserl 1970: 475)

As a consequence, the parts of a house, although in themselves indifferent, become moments: the relation between parts is inscribed in the formal definitory patterns and pre-exists the *relata* themselves *qua* the *relata* that they are. The terms are already relational or, in Husserl’s terminology, partial; relation to co-existent parts and to the whole is inherent in the part.

This means that the parts are homogeneous, always opening according to their nature, which is that of the whole and the foundation, to each other. There is nothing between the parts that would imply the separability and independence accorded to the pieces of a fragmented whole, no interruption of the overflowing, structuring and penetrating essence of the foundation. To found (*Fundieren*), then, is to establish a homogeneous plane, without schisms, breaks or enclosures between the related terms that inhabit it. To inhabit this plane means to be instituted as related and, hence, relation presupposes the homogeneity bestowed by the foundation, founding the relational plane that is the whole and exhaustively penetrating its parts.

In this sense, Husserl’s *Fundierung* constitutes, in Deleuze’s terms, ‘a structural instance’ that plays ‘the role of law, or of cause’ (Deleuze 2006: 77), the fountain of legality and necessity and the subject of the unity. The founding part is not strictly speaking a structural element, a point in or of the structure, but, more precisely, the principle of structuration itself. The foundation engulfs the parts and the unity of composition is *its* unity, the concomitant of *its* ‘spiritual labour’ (Deleuze and Guattari 2004: 6). On account of this labour, the *Fundierung* effectuates an *active* synthesis: a composition that is the result of its agency.Deleuze, therefore, describes such a foundation as both ‘structural *and* genetic’ (Deleuze 2006: 68) in that its spiritual labour takes a number of determinate forms.

Husserl’s wholes are planes of homogeneity; homogeneity allows the measurement of distances and, hence, the institution of mereological hierarchies. The notion of mereological ‘distance’ is a crucial feature of essentialist or foundationalist theories of parts and wholes and it helps explain the paradoxical nature of Deleuze’s transversal connections. Transversality illustrates the contrast between the proximities between the parts of an assemblage and the distances between the founding and founded parts of Husserl’s structures. The root-foundation constitutes a ’hidden principle of organisation’ (Deleuze 2006: 70) that measures and establishes distances not only between its centre and the parts but also between the parts themselves. In other words, a nexus is formed of the essential relations that the foundation has to other parts or that the whole has to its moments. This nexus puts in place a system of coordinates, a means of measuring distance from the *Fundierung*. In this way, there is an objective and necessary division of mediate and immediate horizontal relations between parts and parts of parts, forming neighbourhoods. At the same time, the parts are vertically related to their founding supplement; these relations are also measurable and, hence, either immediate or progressively mediate. Therefore, there are two operations of measuring at work in a whole of moments: first, the horizontal measuring of proximity involved in demarcating neighbourhoods. However, distances are measured between parts because distances are measured between each founded part and the foundation. By means of the position they occupy relatively to the foundation, parts are said to be nearer or remoter (*nähere - fernere*) in relation to other parts, thus standing ‘in relations of nearer or remoter connection’, and, at the same time, in relation to the whole, thus constituting ‘primary, secondary… parts of a whole’ (Husserl 1970: 472). Thus, the proximity of moments, their neighbourhood or ‘the requisite gradations of “distance”’ (Husserl 1970: 474), presupposes that these neighbourhoods occupy a position in the plane of organisation on which they find themselves, whether mediately or immediately, relating to an organising and founding centre.

Thus, in addition to the homogeneity and openness of parts that are internally related or, in short, founded, Husserl’s foundationalist mereology entails the hierarchisation of parts according to their distance from the foundation. Husserl’s structures are hierarchical since, in relation to the whole, parts are further or closer from the instance of structuration. In particular, the hierarchical structuring of the foundation involves a history, a grammar and a teleology. Composition has a history or a genealogy which, when traced, leads back to the point of genesis; unified wholes possess ‘the history in which they are developed’ (Deleuze 2006: vii). Further, the foundation establishes the conditions of completion and acts not only as the origin out of which composition flows but also as the end, the destination (Deleuze and Guattari 2004: 323), towards which it tends, so that the structure that it develops is teleological, what Deleuze calls ‘a teleological plane’ of organisation (Deleuze 2006: 69). Finally, on account of this ‘structural or generative’ point (Deleuze and Guattari 2004: 13), these wholes are also governed by ‘logico-grammatical laws’, which regulate the progression of the relational conjunctions of composition (Husserl 1970: 494). These relations, the ands of conjunction between parts, directly correspond to the essential, internal nature of the foundation, which, accordingly, establishes a logic of relations or an ‘*a priori grammar*’ (Husserl 1970: 493) of possible conjunctions.

The main characteristic of this grammatical, historical and teleological structure is the ‘subordination of conjunctions to the verb to be’ (Deleuze 2006: 42). The being of the whole has ontological priority over the being of the parts and, as a consequence, over the and that binds the parts in the whole. Conjunction is reduced to the expression of the essence of the *Fundierung* that overflows into other parts, gathering them, penetrating them and constituting them *qua* relational non-independent beings, i.e. as *Inhaltsteile*. This inherent relationality distinguishes the moments of a whole from the pieces of a mere aggregate, in that the parts are inherently relational or that their relations are internal to the parts. A house, a machine, an organism are conceived, in Deleuze’s words, as systems of ‘closer and closer connections between dependent terms’ (Deleuze 2006: 77). The and is, therefore, parasitic on the is, relations between parts to the gathering expression of the essence of the overflowing foundation, which in this way differentiates itself without ever referring to anything outside itself. The parts are, in turn, ontologically secondary to the relations from which they receive their constitution.

Thus, this causal, generative, active instance of structuration – the Greek *ἀρχὴ*, Husserl’s *Fundierung* or Deleuze’s ‘root-foundation, *Grund*, *racine*, *fondement*’ (Deleuze and Guattari 2004: 20), the ‘point of origin, seed or centre’ (Deleuze 2006: 19) – sustains the multiplicity of parts in a way that the separation necessary for the recognition of parts needs to be supplemented by the dimension of the historical, grammatical, hierarchical and mereological whole in which they co-exist with other parts. In all these ways, the root imparts its own logic of causality and constitutes the causal agent *of* the composition, or, what is the same, of an *active* mereological synthesis. The metaphysics of composition, then, consists in the description of the cause and effect relations between the founding and founded parts of wholes.

To conclude, for Husserl, composition is a law-governed operation that proceeds to gather parts that are intrinsically related to a foundation that supplements and causes them. The founding, causal, genetic, active and supplementary instance of structuration bestows and sustains the unity of the whole: the unity of the whole is the unity of the foundation, in which all parts are positioned and measured.

**III. *Effondement* and mereology**

Husserl’s logic makes clear the parameters of arborescent construction: its unity is the unity of the being of the foundation that supplements, permeates and constitutes the whole structure. The relations in which parts stand in a whole are exhaustively internal relations and wholly constitutive of the moment-parts. DeLanda refers to this type of relationality as ‘relations of interiority’, which form the basis for what he calls ‘the organismic metaphor’ (Hallward goes even further and calls them ‘non-relations’) (DeLanda 2006: 9). These are relations that imply a ‘strict reciprocal determination between parts’: ‘the component parts are constituted by the very relations they have to other parts in the whole’ (DeLanda 2006: 9). In other words, relations of interiority ‘constitute the very identity of the parts’ (DeLanda 2006: 18). These parts are moments of an organic whole conceived ‘as a seamless web of reciprocal action, or as an integrated totality of functional interdependencies, or as a block of unlimited universal interconnections’ (DeLanda 2006: 19). Such a whole constitutes a homogenous, continuous and indivisible but *complex* oneness on account of the unity of the foundation that generates this complexity in the act of generating the parts as its moments. Relations of internality express the organising power of the foundation. Thus, Husserl’s metaphysics of parts and whole involves only internal relations and reduces composing conjunction to the internal being of the self-differentiating foundation.

The temptation for anti-foundationalist projects is to oppose the discreteness, discontinuity and divisibility of atomic entanglements to the continuity and indivisibility of total wholes or, what is the same, to oppose the independence of the atomic piece to the relational dependence of the founded moment. This understanding of anti-foundationalist mereologies involves the following imperatives: that we should assume the primacy of relations that are external and non-constitutive of the terms that they relate; that we should uphold the reality of relations insofar as they obtain between already constituted objects that are first and foremost disjuncts, that is, pieces in wholes that are not only divisible but really divided; that we should accept the fragmentation of the whole, that is, its failure to lay claim to any sense of oneness, to be the necessary consequence of an operation of pure conjunctions (a pure and) that brings together without principle, i.e. without ever overcoming the discontinuity and intervals between heterogeneous parts; that, as a result, we should conceive of these relations as external relations between atoms so as to ensure that the discontinuity inscribed in wholes should not be reducible to the differentiation or self-bifurcation of a root; that we should assert the irreducibility of this pure and to the is and of the independent *relata* to their relations; finally, that we should consider unity to be the *effect* of the conjunctive power of and rather than its cause.

But, on the basis of such a conception of anti-foundationalist metaphysics, what would relations of exteriorityinvolve? The putatatively unfounded terms of composition presuppose an ontological type of disjunction and division. In other words, according to this understanding of the relationality of parts, the primacy of inter-atomic, external relations is tantamount to the claim that between atoms there is not being but not-being. This conception of the *spatium* over which relations take place as void (*vacuum*) is the result of and the prerequisite for the abolition of ontological wholes composed of moments founded upon a generative, active structural instance. The relations in which the atomic terms stand imply, according to DeLanda’s formulation, ‘that a component part of an assemblage may be detached from it and plugged into a different assemblage in which its interactions are different’ (DeLanda 2006: 10). The terms of relations of exteriority are independent, ‘self-subsistent’ pieces that ‘may be detached and made a component of another assemblage’ (DeLanda 2006: 18).

The upshot of these descriptions of relationality is that an anti-foundationalist, pluralist ontology should deploy the independence and discontinuity of the parts of assemblages against the dependence and continuity of the founded parts of foundationalist metaphysics. In other words, that an ontology that is devoid of foundations should be inscribed within the parameters of external relations and of the *vacuum* in which they occur. The temptation, then, is to deflate putatively our ontology by divesting wholes of primacy or reality and bestowing it to the parts. I will now argue that this is not how Deleuze conceives of *effondement*; that far from discarding the notions of internality, dependence and continuity, the mereology that underpins Deleuze’s theory of Ideas recasts Husserl’s categories for the purposes of inauguratingan anti-foundationalist metaphysics of structure.

### IV. Multiplicity as a substantive

Deleuze’s metaphysics of parts and wholes proposes a shift in the way that we look upon the actual entities, selves and things that inhabit our world as ‘incarnations, as cases of solution for the problems of Ideas’ (Deleuze 2004a: 230), that is, as the meta-stable, ever-changing results of a process of individuation. Deleuze’s ontology may be summarised in the claim that individual actual entities are the interim results of a parallel virtual process of individuation. This virtual field is the ‘genetic ground of the actual’ (Smith and Protevi 2008). Furthermore, these actual individuals are continuously susceptible, permeable and open to the tremors of the virtual processes that bring them into existence. The virtual and the actual, therefore, are not two metaphysically separate realms: there is only one ontologically univocal plane, that of the virtual-becoming-actual. The actual individual *remains* embedded in the virtual realm of individuating processes and is continuously determined by its generative power; while the virtual individuating processes – *only* and *always –* become actualised in the individuals of the actual world. Actual objects are plunged into a ‘virtual objective dimension’ that is just as real as the actual objective dimension of their actualisation (Deleuze 2004a: 260).

The fourth chapter of *Difference and Repetition*, entitled *Synthèse Idéelle de la Différence*, elaborates the conceptual apparatus that makes this shift in our understanding of individuation and ontogenesis possible. Not only does the theory of Ideas provide a detailed description of the processes that lie at the core of Deleuze’s metaphysics but it also contains a sustained argument which is crucial for the coherence and validity of the Deleuzian system. This argument concerns the notions of differentiation, relationality and structure on which Deleuze establishes his account of virtual processes of individuation.

The theory of Ideas puts into effect Deleuze’s programme against essentialism in the form of a metaphysics the basic category of which is multiplicity: ‘Multiplicity, which replaces the one no less than the multiple, is the true substantive, substance itself’ (Deleuze 2004a: 230). Deleuze sketches the principles of a pluralism in which multiplicity does not designate ‘a combination of the many and the one, but rather *an organisation belonging to the many as such, which has no need whatsoever of unity in order to form a system*’ (Deleuze 2004a: 230, emphasis added). On the one hand, this multiplicity is without unity; it is not a combination or mixture of one and many (one thinks here of a contrast with the Presocratic pluralists and the atomists). The multiple as such is the purely multiple, the many-in-themselves containing no ontological or epistemological reference to the one. Deleuze’s multiplicity – the many as such, the substantive multiple – is proclaimed as radically conceived (for epistemology) and pure (for ontology) manyness, entirely devoid of any presence of the one.

On the other hand, the same proposition that divests multiplicity of unity at the same time describes it as ‘an organisation’ forming ‘a system’, albeit without the intervention of the one. Multiplicity is described as a structure, but a structure that configures the parts that come to occupy its positions without recourse to unity.

Now, these preliminary descriptions of multiplicity (pure, radically conceived, as such, substantive, substance itself) raise a series of questions that I will address here. To begin with, what is the import of the proclamation that multiplicity is ‘substance itself’? Are there many substances or is substance – somehow – many? Further, whence the compositional, regulatory and genetic capacity of the multiple, if this multiple is not a ‘combination of the many and the one’? Finally, how does multiplicity constitute an organisation, a system and a structure, if it precludes recourse to the adjectival types of the many?

The ontology developed in *Difference and Repetition* effects a fundamental replacement, namely, that ‘the differences between multiplicities and the differences within multiplicities replace schematic and crude oppositions’ (Deleuze 2004a: 230). Let me begin by exploring in more detail the kind of shift or replacement that Deleuze attempts to conduct by means of the notion of multiplicity. What happens, in other words, when ‘a typological difference between substantive multiplicities [...] is substituted for the dialectical opposition of the one and the multiple’ (Smith and Protevi 2008)? Deleuze makes clear that this substitution is the only way to overcome the impasse of the dispute between monists and pluralists: ‘It happens the moment the one and the multiple cease to be adjectives and give way to the substantive: there are only multiplicities’ (Deleuze 1973). This substitution can be articulated by means of a contrast between two kinds of pluralism, only one of which meets the conditions for a radical, dangerous, enticing account of multiplicity and differentiation. On the one hand, there are the pluralisms that rest on the crude and schematic opposition between one and many. This opposition allows for the combination of one and many, which is the principal ontological operation in these pluralisms. Ontogenesis is then construed in terms of the combination and ‘enormous opposition’ between a white and a black nothingness (as is the case for Husserl and Aristotle). The many needs unity in order to form a system. For this reason, in his lectures at Vincennes, Deleuze identifies this inadequate pluralism with an implicit dualism: ‘dualism is defined by the employment of the one and the multiple as adjectives’. The dispute does not concern the choice between monism and pluralism, between which Deleuze establishes a ‘strict identity’, but between pluralism and dualism: ‘a monistic field is indeed a field inhabited by multiplicities’. The passage from dualism to pluralism or, what is the same, from false pluralism (and its corresponding ‘false monism’) to a *true*, dangerous, enticing and consistent pluralism, entails the working of

this magical operation that consists in forbidding the employment of the adjectives one and multiple, in order to retain only the substantive multiplicities, this is the operation that gives an account of the identity of monism and pluralism and which related the true source of dualism to the duality established between two adjectives: the one and the multiple.

(Deleuze 1973)

In contrast to this dualistic pluralism, which constitutes ‘an empty discourse which lacks a substantive’ (Deleuze 2004a: 230), Deleuze presents the following alternative: a metaphysics in which multiplicity plays the role of substance, with the principles of organisation belonging to the many as such and in which everything, even the one and the many, is multiplicity, divesting oneness of its ontological authority and efficacy and abolishing the opposition and combination of one and many as the mechanisms of ontogenetic composition.

What becomes of parthood when the multiplicity of ideal parts is thought of ‘substance itself’? It is important to take note of Deleuze’s formulations here. Deleuze does not claim that substance is multiple, which would imply that there is a multiplicity of substances. At the same time, neither does he proclaim substance to be multiplicity, which might require that we think about a self-organising and self-dividing whole that *appears to be* multiple (in the sense that appearance is used in Plato, as an alternative to being). Instead, Deleuze’s formula is: multiplicity is substance itself, the true substantive. This formulation requires a new conception of what it means to be substance as well as what it means to be multiple. Interpreting Deleuze’s formulation entails recognising and articulating this conceptual innovation.

If multiplicity is substantive, the world swarms in multiplicities. In spite of such omnipresence, however, multiplicity proves to be an elusive constituent of the world. Where does one begin to search for such constituents? It seems that at the very moment when the multiple is captured by the metaphysician’s system, oneness resurfaces as the oneness of *this* and *that* multiplicity (the atomists’ problem). How to grasp multiplicity without - at the very act of grasping it - surrendering it to the one? This is the difficulty that Deleuze recognises and guards against when he insists that ‘there is only the variety of multiplicity – in other words, difference’ (Deleuze 2004a: 230). Multiplicity is elusive and resists reification because it *exists* only by *taking place* as a variation, that is, as the proliferation of differences between and within multiplicities.

But this merely anticipates the conclusion of Deleuze’s argument. The account of *how* multiplicity exists as a substantive requires the examination of Deleuze’s theory of Ideas, in particular his conception of reciprocal determination. For the reader of *Difference and Repetition*, it becomes immediately obvious that the basis of Deleuze’s pluralist metaphysics is his elucidation of Ideas (*les Ideés*): ‘Ideas are multiplicities: every Idea is a multiplicity or a variety [*variété*]’ (Deleuze 2004a: 230). As Bryant argues, ‘for Deleuze the problem of the Idea is one of organisation’ (Bryant 2008: 230). Ideas function as ‘focal points or horizons’ (Deleuze 2004a: 215), by means of which the constitution of a unitary field is made possible. Ideas unify; they are the principles through which wholes are formed, so that, in the context of the mereological vocabulary I have been using, they constitute structures that regulate composition (hence, their genetic, regulative function).

### V. Ideal continuity and relationality

What is distinctive about Deleuze’s conception of the ideal focus or of the principle of unification is the fact that Ideas are problematising structures engendering solutions: ‘every solution presupposes a problem – in other words, the constitution of a unitary and systematic field which orientates and subsumes the researches or investigations in such a manner that the answers, in turn, form cases of solution’ (Deleuze 2004a: 215). To say that Ideas are problems or problematic and problematising means that Ideas relate to the parts that they unify as a problem relates to its solutions. An Idea is ‘the indispensable condition’ without which none of its solutions would ever exist. As such, the Ideal structure is at once immanent and transcendent in relation to the cases of its solution, or to what Deleuze will refer to as its incarnations.

If Ideas constitute foci and horizons of unification, at once transcendent and immanent in relation to the parts that they configure and to the configurations themselves; if, that is, Ideas play the role of generative and productive principles that involve the development of correlative notions of parthood and wholeness; then, Ideal organisation must entail some kind of an as yet undetermined notion of continuity. Indeed, the fact that Ideas function precisely as realms and instigators of continuity is inscribed in Deleuze’s famous definition: ‘an Idea is an n-dimensional, continuous, defined multiplicity [*Une Idée est une multiplicité définie et continue, à n dimensions*]’ (Deleuze 2004a: 230). The fact that Ideas are described as continuous already makes clear that Deleuze’s metaphysics is not one of aggregates of discontinuous parts between which there is not-being. Ideal multiplicities are continuous multiplicities; Deleuze goes far enough to describe ideal distinctions as ‘fluent’ (Deleuze 2004a: 258). Multiplicities, therefore, constitute *real* wholes. The question is then raised as to the specific mode in which Ideas effect unification and the way in which they constitute unifying foci or horizons. In other words, what constitutes an ideal whole? Or, conversely, what are the ‘fluent ideal distinctions’ that determine the ideal elements?

In order to answer this question, Deleuze postulates three conditions that govern the emergence of Ideas and that frame his conception of ideal mereological distinctions and relations. To begin with, Ideal multiplicities are composed of elements that have ‘neither sensible form nor conceptual signification’ (Deleuze 2004a: 231). In this sense, these elements may be said to be indeterminate, if determination refers to the emergence of identity by means of a conceptual operation, such as the application of predicates floating in white nothingness, and to lack actual existence. Instead, the elements of a multiplicity are ‘inseparable from a potential or a virtuality’ (Deleuze 2004a: 231). As a consequence of this indetermination, the elements composing an Idea lack the kind of existence that would allow the philosopher (or the architect, the machinist, the artist etc.) to identify them as already determined parts. This injunction ensures that Deleuze’s account of multiplicity escapes the pitfalls associated with atomism. Actual indetermination or, what is the same, virtuality, is the first result of the requirement that multiplicity be divested of any trace of oneness.

Further, although the elements are inherently undetermined when considered from the perspective of actuality, they are nevertheless determined reciprocally by means of reciprocal relations. As Deleuze writes in *Logic of Sense*, ‘each of these series [in structure] is constituted by terms which exist only through the relations they maintain with one another’ (Deleuze 1990: 50). What constitutes a reciprocal relation? In particular, how is it possible for an indeterminate element to enter into a relation of determination, albeit a reciprocal one? To put it in Deleuze’s mereological terms, how is it possible for an element to be at once undifferen*c*iated and differen*t*iated? In order to explain how it is that such a relation be possible, Deleuze employs the concept of the differential relation *dy/dx*. The notion of reciprocal, relational determination. contains simultaneously three distinct principles: ‘a principle of determinability corresponds to the undetermined as such (*dx*, *dy*); a principle of reciprocal determination corresponds to the really determinable (*dy/dx)*; a principle of complete determination corresponds to the effectively determined (values of *dy/dx*) (Deleuze 2004a: 217). Now, *dx* is ‘strictly nothing’ in relation to *x*; it is completely undetermined. Nevertheless, *x* is ‘perfectly determinable’ in relation to *dy*, such that ‘a principle of determinability corresponds to the undetermined as such’ (Deleuze 2004a: 219). As he writes in ‘How Do We Recognise Structuralism?’: ‘*dy* is totally undetermined in relation to *y*, and *dx* is totally undetermined in relation to *x*: each one has neither existence, nor value, nor signification. And yet the relation *dy/dx* is totally determined, the two elements determining each other reciprocally in the relation’ (Deleuze 2004b: 176).

This account of the process of reciprocal determination explains the dependence and relationality of ideal parts. *dy/dx*, the differential relation, pertains not between localisable quantities; instead, ‘each term exists absolutely only in its relation to the other’ (Deleuze 2004a: 219). It is no longer possible to refer to the independent parts of a relation. The differential elements are ‘completely undifferenciated [*undifferenciés*]’ but ‘completely differentiated [*differentiés*] (Deleuze 2004a: 219); that is, they possess ‘the determination of the virtual content’, at the same time while they lack ‘species and distinguished parts’ (Deleuze 2004a: 258). The determinability of the terms is the result of a reciprocal synthesis, which, due to the fact that the elements possess no differen*c*iation or determination of their own, presupposes *internal*, determinant relations rather than external connections:

An Idea, in this sense, is neither one nor multiple, but a multiplicity constituted of differential elements, differential relations between those elements and singularities corresponding to those relations. [...] ideal elements – in other words, elements without figure or function, but reciprocally determined *within* a framework of differential relations (ideal, non-localisable connections).

(Deleuze 2004a: 348)

The reciprocally determined parts are not given once and for all, but ‘must be secured step by step, and the relations themselves established between them’ (Deleuze 2004a: 262). This means that reciprocal determination is also a *progressive determination*, in which the ideal parts and the relations obtaining between them are progressively constituted in the process of the reciprocal determination. This is a consequence of the fact that reciprocal determination is an internal relation between ‘embryonic elements’ rather than an external relation between already-constituted pieces (Deleuze 2004a: 260).

Crucially, the notion of relational, progressive, reciprocal and differential determination means that Deleuze is here putting forward a theory of composition that posits *dependent* parts: ‘reciprocal relations [...] allow no independence whatsoever to subsist’ (Deleuze 2004a: 231). Partial dependence or the reciprocal determination of ideal parts is a second conclusion that is deduced from the demand that ideal elements must ‘imply no prior identity’.

### VI. Atomic independence

Thus, combining the results of the first two conditions, the parts of a multiplicity are subject to actual indetermination and virtual reciprocal determination. Both of these conditions together entail the conclusion that Deleuze’s account of the multiple, his conception of fragmentary parthood and his solution to the dispute between monists and pluralists – his pluralism – cannot be reduced to an account of the atomist variety, for reasons that pertain to the coherence and adequacy of such an account. Atoms are inherently determined and, hence, too independent: ‘the Epicurean atom still retains too much independence, a shape and an actuality’ (Deleuze 2004a: 233).

What does it mean to say that atoms ‘have too much independence’? A compound whole composed of atoms is an entanglement of absolutely separate elements. The conjunction of atoms in such compounds presupposes disjunction between the elements, which therefore become entangled from without and never from within. Enclosure requires closure: atoms are enclosed in compounds because they are closed in themselves. As a consequence, the atomists do not propound a theory of composition by mixture of being and not-being, but a theory of entanglement or intertwinement according to which discrete beings interlock when they are trapped or enclosed, confined or locked with other beings existing and moving in empty space. This does not amount to a theory of mixture because the density and solidity of body is constant, being invariably absolutely full; the same applies to the intangibility and non-resistance of the void, being invariably absolutely empty. Macroscopic objects, the products of complication, are more or less porous precisely because they are compounds not of being and not-being but of beings in not-being. Void is absolutely permeable, body absolutely impermeable; these are exhaustive definitions. Phenomena of relative fluidity and solidity observable in macroscopic bodies concern neither the absolute rigidity of bodies nor the absolute intangibility of the void, but only the ratio expressing the number of atomic magnitudes locked in a particular segment of space. This ratio expresses a relative density neither of being nor of not-being nor, what is more, of a mixture of being and not-being but a density that is relative to the entanglement of absolutely full bodies in absolutely empty space and that determines the nature of the entanglement or interlocking: relatively solid or fluid, earth, water or air. Thus, the question that the Epicurean physicist asks, and which helps to explain what it is about this physics that appeals to Deleuze and draws him to Lucretius’ naturalism, is a quantitative question: ‘How many locked atoms?’ and ‘How large an area of confinement?’. With Epicurus and Lucretius, Deleuze comments quoting directly from Lucretius’ poem, ‘it is a matter of resemblances and differences, compositions and decompositions, “everything is formed out of connections, densities, shocks, encounters, concurrences, and motions”’ (Deleuze 1990: 268). However, despite this intellectual affinity, Deleuze amends, reformulates and radicalises the atomists’ question.

Deleuze’s criticism revolves around the role that not-being plays in the atomist theory of differentiation. In particular, the criticism points to Deleuze’s conditions for an account of multiplicity and parthood, of disjunction and connection, of composition and structure. Central to these conditions is the critique of the atomist conception of the *spatium* of the between, of discontinuity and disjunction and the role that not-being, as void, empty space and nothing, plays in these. For atomism, the void is the site in which relations that are external to the terms are established; between the self-enclosed and self-unified atoms there is spatial emptiness. Parts are considered to be unified in themselves only because they are radically separate; in this way their simplicity, the fact that they are wholes without parts that come to be entangled, but never to mix, in wholes with parts, is theoretically guaranteed. There is *nothing* between the parts. If anything but nothing lay between atoms, atoms would face the danger of fission. Thus, commitment to atomic enclosure and unity entail commitment to the existence of not-being. The account of multiplicity in terms of pieces or atoms does not satisfy the ‘conditions of structure’ (Deleuze 2004a: 233) that Deleuze has set for the understanding of the many and does not amount to a reversal of the essentialist picture of composition and, hence, to a radical or consistent conception of *effondement*. To reverse this picture it is not enough to begin with the many, in which case the foundation is now transferred within the atom-pieces, but rather not to begin or to begin in the middle, that is, to place concreteness on the manyness of the many, without any recourse to the mediation of a foundation, whether atomic or substantial.

The relations that pertain between atoms are external spatio-temporal relations that take place between already actually constituted elements and over the expanse of not-being, submerged in a uniform, indifferent *spatium* conceived as *vacuum*. This means that the relations themselves have no determining effect, in other words, that they are not reciprocal relations between actually indeterminate elements. Deleuze’s conditions, in contrast, establish that there must be *something* – not nothing – between the elements that bestows determination upon them, an inter-being instead of the atomists’ not-being that already contains the elements, which, for their part, subsist as openings upon this inter-being that permeates them thoroughly rather that as solid beings closed to not-being. To put it differently, a multiplicity is ‘intrinsically defined’ (remember that an Idea is a defined multiplicity), in that its elements reciprocally determine each other by means of relations of dependence. This conclusion and the terminology in which it is articulated undermines the widespread certainty that the principal and exclusive category of Deleuze’s ontology is the idea of ‘external relations’ – at least in the case of the ontology developed in *Difference and Repetition*.

### VII. Partial differen*t*iation and differen*c*iation

Thus, in contrast to Epicurean atoms, ideal parts are relational, dependent elements that receive determination only in the context of the virtual *spatium* (no longer a *vacuum*) of the Ideal whole. However, this dangerously aligns Deleuze’s conception of parthood with Husserl’s *moments*, ‘dangerously’ because of the limitations of essentialism to account for partial differentiation. Has Deleuze, in his attempt to avoid the hidden pitfalls of atomism and its *pieces*, fallen into the trap of a more obvious enemy that explicitly surrenders parthood and wholeness to the provenance of the one? Does not his insistence on the interiority of multiplicities mean that the reciprocal relations between the parts are in reality internal relations *within* a multiplicity; and, therefore, does the multiplicity not take on the appearance of a totalising, founded whole that exists prior to its parts? If between the parts there is *something* (inter-being) that is not not-being, what precludes the postulation of this something as *being*, and, hence, what precludes the reduction of the elements to relations of interiority and of the confusion of the actual indetermination and reciprocal relationality and dependence of the parts with the relationality of relational, partial, founded moments? In other words, on what grounds does Deleuze argue that it is the notion of ‘(non)-being or ?-being which denounces simultaneously both being and non-being’ (Deleuze 2004a: 254)?

Deleuze himself recognises the danger that the notion of ‘internal multiplicity’ introduces when he writes: ‘spatio-temporal relations no doubt retain multiplicity, but lose interiority; concepts of the understanding retain interiority, but lose multiplicity’ (Deleuze 2004a: 231). Deleuze here both establishes a typology of positions (essentialism – atomism, vitalism – mechanism) and also acknowledges that these positions are inadequate for the formulation of an adequate account of multiplicity, a mereological Scylla and Charybdis. The dual demands of interiority and multiplicity provide the axes on which Deleuze’s response is articulated; they also repeat the dilemmas of the ancient dispute between monists and pluralists, with which Plato also wrestled in his *Parmenides*; and bestow a paradoxical character on Deleuzian mereology: *both* internality *and* multiplicity; *both* genesis *and* structure. This is the conceptual minotaur that both parties of the disputeconsider to be an impossible abomination: an internal multiplicity with a structural and genetic nature. All the terms contained in this formula seem to cancel each other out.

The third condition of multiplicity aims to resolve this impasse: ‘a multiple ideal connection’, Deleuze writes, ‘a differential *relation*, must be actualised in diverse spatio-temporal *relationships*, at the same time as its elements are actually incarnated in a variety of *terms* and forms’ (Deleuze 2004a: 231). This condition relates to the way in which Ideas provide the structure for the emergence of a multiplicity and that govern the process of actualisation. It is in the description of the ideal structure or of the capacity of ideal multiplicities to constitute structures for the emergence of actual mereological wholes that the internality, relationality and dependence of ideal parts is firmly contrasted with the internality, relationality and dependence of Husserl’s founded moments. Upon actualisation, the virtual, reciprocally determined and determining elements of the Idea (which he will later refer to as *fragments*), which are indeterminate when considered from the perspective of actuality, elicit actual parts. At the same time, the reciprocal, internal relations between the ideal elements actualise themselves in terms of the spatio-temporal ordering in which the actual parts are found: ‘Differenciation is always simultaneously differenciation of species and parts, of qualities and extensities: determination of qualities or determination of species, but also partition or organisation’ (Deleuze 2004a: 262).

What then constitutes an internal multiplicity and what defines its efficacy as a structure? An Idea is ‘a system of multiple, non-localisable connections between differential elements which is incarnated in real relations and actual terms’ (Deleuze 2004a: 231). The inner complexity of a whole, for Deleuze, is a matter of indeterminate elements reciprocally determined giving rise to actual spatio-temporal relations and actual parts. This formula of complexity describes the process of actualisation, that is, the coming-into-being out of inter-being of beings. It is thus a formula of ontogenesis, the cornerstone of which is a conception of structure as genetic.

Now, if the notion of a genetic structure seems problematic, if one discerns a ‘difficulty in reconciling genesis and structure’ (Deleuze 2004a: 231), this is only because the presuppositions about what constitutes a structure and what is involved in genesis are inscribed within mereologies of aggregates and pieces, such as the one underlying the atomists’ physics. In contrast, for Deleuze, there is a ‘complementarity of [...] genesis and structure, where this takes the form of a passive genesis’ which is revealed in actualisation (Deleuze 2004a: 255). The mereology that Deleuze is delineating in the few dense pages under discussion allows for structure to have a genetic function and, therefore, for a conception of wholes that escapes aggregates, atomic pieces and the external relations pertaining between the parts over the expanse of *vacuum*, because structure refers not to relations ‘between one actual term, however, small, and another actual term, but between the virtual and its actualisation’ (Deleuze 2004a: 231). At the same time, real genesis, that is, that process the provenance of which is the formation of real wholes, which, according to atomism, belongs to monist ontologies in which the account of multiplicity is surrendered to the magical power of the one, goes ‘from the differential elements and their ideal connections to actual terms and diverse real relations’ (Deleuze 2004a: 231-32). Genesis is here reconceived not as a process of the self-gathering of the whole by means of a foundation that assembles, exhausts, permeates and engulfs its derivative parts but as a process that takes place between differential elements, that is, elements which are indeterminate outside the whole to which they belong, hence, internal and dependent to the internal multiple whole, *but also* elements that are determined reciprocally by means of relations between each other. Deleuze has abolished the vertical organisation of Husserlian wholes, which necessitates the notion of a mereological distance, historicity and hierarchy between the parts, and recast it in terms of a horizontal geographical transversality which permeates the parts precisely without exhausting them or reducing them to the manifestations of the self-movement of the foundational one. Deleuze describes this horizontal genetic organisation of multiplicity as a *static* and *passive* genesis, precisely because it does not refer to the self-determining activity of a prior, however implicit, wholeness and unity or, as Bell notes, because ‘there is no active, creative agent directing the process’ (Bell 2006: 191). Indeed, ‘this is a genesis without dynamism, evolving necessarily in the element of a supra-historicity’ (Deleuze 2004a: 232); a veritable *static* ontological genesis (Deleuze 1990: 109-117) in the sense that neither the movement of atoms in *vacuum* (the *clinamen*) nor the self-movement of the *Fundierung* in *plenum* are adequate to describe the process of ideal composition. In the same vein, the being of the multiplicities that participate in the processes of actualisation is described as impassable and neutral (Deleuze 1990: 100), echoing the passivity which characterised Parmenides’ inviolate being. In the conjunctions ‘impassibility *and* genesis, neutrality *and* productivity’, Deleuze’s mereology breaks with foundationalist models of composition in proposing that genesis and productivity are processes that, in the case of being, are separate from the over-flowing activity of the being of the foundation. Thus, ‘the reality of the virtual is structure’ (Deleuze 2004a: 260); or, equally, as Deleuze writes in ‘How Do We Recognise Structuralism?’, ‘every structure is a multiplicity of virtual co-existence’ (Deleuze 2004b: 179).

To sum up Deleuze’s definitions of this ideal structure: the differential, ideal, non-localisable relations between indeterminate, virtual elements that internally and progressively determine a multiplicity furnish structures of actualisation or incarnation in real relations between actual terms. This virtual structure, the complexity of this ‘complex theme’, constitutes an ideal system or an internal multiplicity that brings into existence actual terms and real relations. The name of this process of static, non-dynamic geneses is actualisation or incarnation. Ideas are, therefore, systems of differential relations between reciprocally determined genetic elements. The Idea is composed of reciprocally determined elements that are the genetic conditions for the emergence of real objects determinable in space and time. The actual terms and relations originate within the system of reciprocities of ideal connections. Actualisation is a morphogenetic process that entails the composition and organisation of extensional parts as well as the determination of quality. Behind and beyond the actual multiple there subsist virtual multiplicities, at once transcendent and immanent in the actual pluralities and varieties, that constitute the planes of immanence in which morphogenetic processes take place. As Deleuze puts it in his lectures on Bergson:

there are two types of multiplicity: one is called multiplicity of juxtaposition, numerical multiplicity, distinct multiplicity, actual multiplicity, material multiplicity, and for predicates it has, we will see, the following: the one and the multiple at once. The other: multiplicity of penetration, qualitative multiplicity, confused multiplicity, virtual multiplicity, organized multiplicity, and it rejects the predicate of the one as well as that of the same.

(Deleuze 1970)

Thus, the dependence of the ideal elements of a reciprocal relation that constructs a multiplicity is a reciprocal dependence that differen*t*iates what is undifferen*c*iated. Partial differentiation in Deleuze refers to the process of co-functioning and co-existence (‘Ideas are complexes of co-existence’, Deleuze 2004a: 235) of dependent, virtual parts in the context of the reciprocal synthesis that functions not between them, as if the elements were separable, independent differenciated pieces, but within and between them at the same time. The parts acquire a tenable and conditional interiority only by remaining open to the genetic virtual *spatium* that permeates them.

**VIII. *Spatium***

What this means for the conditions of a successful account of multiplicity is that the single formula ‘there is nothing between the parts’, which in two contrasting senses lay at the heart of both essentialism and atomism, needs to be rejected in both of these employments. There must be something between the parts that is neither nothing, in the atomist sense of ontological emptiness and the discontinuity of the void, nor nothing, in the essentialist sense of the overflowing continuity secured by the being of the root: there is the something of the between, which is neither being nor not-being.

In contrast to the atomists’ *vacuum*, this Deleuzian *spatium* is the locus of inter-being (or, in *Difference and Repetition* and *Logic of Sense,* the being of the problematic, (non)-being, ?-being and 0/0, Deleuze 1990: 123 and Deleuze 2004a: 253) in which transversal, genetic, internal relations obtain between ideal elements. At the same time, these elements come into existence by already being open to this virtual genetic *field*. As described in ‘The Method of Dramatisation’ (Deleuze 2004b: 94-116), this constitutes an ‘intensive *spatium* that pre-exists every quality and every extension’, ‘a pure unextended *spatium*’ (Deleuze 2004b: 99) and ‘a pre-individual depth’ (Deleuze 2004b: 102), ‘a pure implex’ (Deleuze 2004a: 288). In this way, virtual elements inhabit a continuous ‘pure element of quantitability’; the part of the multiplicity – the fragment – is neither solid *quantum* (‘the fixed quantities of intuition’) nor *quantitas* (the ‘variable quantities in the form of concepts of the understanding’) (Deleuze 2004a: 218).

Thus, *dy/dx*, the reciprocal relation of the differentiation of undifferenciated elements, does not signify a fraction between solid beings: there is no room for independence in multiplicity; instead, it stands for a principle of reciprocal, relational determinability between relational parts. The space in which these connections pertain is not extension, but the depth ‘beneath matters and forms’, out of which both the *extensio* and the *extensum*, the *qualitas* and the *quale* arise: ‘the extensity whose genesis we are attempting to establish is extensive magnitude, the *extensum* or term of reference of all the *extension*. The original depth, by contrast, is indeed space as a whole, but space as an intensive quantity: the pure *spatium’* (Deleuze 2004a: 289). In this depth, dynamic processes dramatise the Idea. It is in this intensive *spatium* that multiplicity is discovered: within the atom and under the ground.

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