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On Whitehead and Deleuze: The Process of Materiality

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Newton's methodology for physics was an overwhelming success. But the forces which he introduced left Nature still without meaning or value A dead nature aims at nothing. It is the essence of life that it exists for its own sake, as the intrinsic reaping of value.

A. N. Whitehead Modes of Thought¹

Introduction

In his long career, Whitehead was, variously, a mathematician, speculative physicist, historian of science, philosopher of science, and philosopher in his own right. As such, he occupies a perhaps unique place within recent western thought. Not only did he advance scientific thought, he also developed a novel, systematic philosophical understanding of science based on a deep historical appreciation of both its theoretical premises and its practical procedures. Whitehead did not dismiss science, he did not see it as divorced from philosophy, nor did he accept the premises which, he maintained, still inform much of modern science. One of Whitehead's great achievements, which will be taken up later in this paper, is his insistence that science, philosophy, the humanities, and social theory all require a renewed conception of nature (in the broadest sense of the word), one which goes beyond strict scientific limitations, beyond any form of biological essentialism or reliance upon some notion of the ultimate laws of physics or nature. Through his philosophy of organism, Whitehead aims to develop a concept of nature that is able to incorporate all existence, thereby bringing together the empirical, the material, the social, the aesthetic, and thinking beings.

Deleuze shares with Whitehead the desire to develop a new ontological approach, one which goes beyond simplistic divisions or categorizations of the

world into subject-object, natural-social, dead-alive, and so on. Like Whitehead, he was also keenly aware of the need to situate such philosophical endeavours within a full appreciation of the history of philosophy. Furthermore, he was acutely aware of the need to uncover and develop the inextricable links, which have often remained hidden, between this history and other realms of thought and practice, such as the political, the social, and the aesthetic.

To attempt to outline all the similarities and dissimilarities, conjunctions and disjunctions between Whitehead and Deleuze is beyond the scope of this paper.²

Yet it would seem clear that their inter-relations and dual attempts to develop what might be termed a non-essentialist ontology is both of relevance and importance across a range of fields at the start of the twenty-first century. In a time of academic uncertainty and renewal--with the increasing focus on inter-disciplinarity and the increasing recognition of the need to reconsider the apparently unbridgeable dichotomy between the natural and the social, the need to move beyond overly culturalist or Foucauldian accounts of subjectivity, the need to renew and develop the inter-relations of science and philosophy--Whitehead and Deleuze offer striking interventions which may prove fruitful for researchers thinking through a range of problems. One concrete example of this is the recent conference (May, 2005) devoted solely to Whitehead and Deleuze, organized by the University of Leuven (Belgium) and held at the Royal Flemish Academy of Arts and Science in Brussels. This brought together an eclectic group of scholars from all over the world, working on Whitehead and Deleuze, and demonstrated both the extent and depth of their current impact across philosophy, cultural theory, literature and literary criticism, mathematics, and sociology and social theory. Whilst this paper will not be able to do justice to all such ramifications, it is hoped that it will operate as an introduction to some of the more significant aspects of the perspective Whitehead and Deleuze share. In particular, it will focus on their understanding of the processual character of materiality or physicality and the challenge they pose to customary scientific conceptions of these. It will also consider the status of subjectivity within their work (in relation to their understanding of materiality) and will conclude with a

brief example of how their work might be applied within social theory to provide a forceful account of the inter-relatedness of materiality and subjectivity in the world.

The Bifurcation of Nature

Throughout his philosophical career Whitehead was intent on arguing against what he described as the bifurcation of nature. He describes this position as follows:

[One] way of phrasing this theory which I am arguing against is to bifurcate nature into two divisions, namely into the nature apprehended in awareness and the nature which is the cause of awareness. The nature which is in fact apprehended in awareness holds within it the greenness of the trees, the song of the birds, the warmth of the sun, the hardness of the chairs, and the feel of the velvet. The nature which is the cause of awareness is the conjectured system of molecules and electrons which so affects the mind as to produce the awareness of apparent nature.

Whitehead views the tacit acceptance of such a theory as having severe consequences for our understanding of nature. Furthermore, it has led to the division of academic inquiry into discrete realms which deal with subject matters so diverse, so different, that they are unable to communicate. Indeed, they may as well be talking about different universes. For example, the material (natural) world has been set out as the province of science. Subjectivity and the experiences and inter-relations of thinking subjects (humans) have been given over to social theory or the humanities. This has led to problems for both fields of inquiry. Within science, the world has become (epistemologically speaking) an inert, external entity divorced from the experiences of thinking subjects. Nature, in its broadest sense, has been reduced to a lifeless realm, devoid of feeling and value; the position and status of thinking subjects within such a scheme has become unexplainable. A conceptual wedge has been driven between a supposedly objective world without meaning upon which science reports and the 'meaningful' realms of human existence with which social

theory or the humanities deal. This has also produced both epistemological and practical problems for the latter disciplines in their attempts to account for the physicality and actuality of subjects and subjectivity. For example, sociologists may have succeeded in the important task of uncovering the political and ideological dimensions of gender but, as has recently been pointed out, this still seems to leave biological 'sex' firmly in the control of the 'real' sciences.³ I shall return to this in the conclusion to this paper. For the moment, put simply, there is still a tendency amongst many to feel that, despite the best and most sophisticated efforts of literary theorists, philosophers, sociologists, anthropologists and so on, science (and scientists) still maintain some kind of a direct access to the 'real reality' (be it in terms of genes, illness etc.). And, this direct access is somehow tied to the priority that modern science has given to describing the very physicality of the world and indeed life.

It is this tension between the very physicality of existence, to which it would seem only science has full claim, and the experiences of subjects, which thereby become the purview of the humanities and social theory, that, this paper will claim, Whitehead and Deleuze may enable us to move beyond. As such, the remainder of the paper will analyse how both Whitehead and Deleuze reject the division of the complexity of existence into over-simplified categories such as the natural and the social. They invite science, social theory and the humanities to re-consider the ontological assumptions which subtend their epistemological positions. One important consequence of both Whitehead and Deleuze's work, which will be drawn out in the concluding section, is the need for a dramatic reconsideration of status of both social and physical existence by going beyond any simple distinction between the realms of the natural and social. In short, this paper will ultimately contend that it is the on-going and eventful process of existence which is social and it is within this that the subjects and objects of nature come to be (and are passed beyond).

Whitehead's Actual Entities

Whilst, it is, perhaps, well known that Deleuze develops an ontology which

avoids foundationalism or essentialism by prioritizing becoming over being, it is sometimes held that such a prioritization is evoked at the expense of notions of materiality or physicality. In such readings, flux and flight are figured as the mainstays of Deleuze's ontological position. Such readings tend to concentrate on passages such as the following:

We have to reflect for a long time to understand what it means to make an affirmation of becoming. In the first place it is doubtless to say that there is only becoming But we must also affirm the being of becoming, we say that becoming affirms being or that being is affirmed in becoming.⁴

The over-emphasis on such statements has led many to miss the point that whilst the focus on becoming is an integral element of Deleuze's philosophy, he also develops a robust account of the very physicality of existence. This paper will demonstrate that Whitehead's less well-known ontology also prioritizes becoming over being, but is, perhaps, clearer in advocating a notion of physicality. His emphasis on "stubborn fact"⁵ is always brought to the fore and, as such, might serve not only as a helpful counter-balance to those who focus on what might be termed the 'joy of flux' but also points to the importance of materiality and physicality within Deleuze's ontology. This is not, ultimately, to dismiss scientific accounts but to enable both science and other forms of theory to investigate the processual character of all existence.

For Whitehead, stubborn fact is comprised of 'actual entities', "the final real things of which the world is made up."⁶ Hence, Whitehead holds, analysis must start with this stubborn fact, with the very stuff of the universe considered as individuated items of matter or materiality. "Thus the ultimate metaphysical truth is atomism But atomism does not exclude complexity and universal relativity."⁷ However, such statements are merely the first stage in Whitehead's argument. The role of actual entities, in Whitehead's work, is to establish a form of materiality which does not rely on the traditional scientific-philosophical rendering of physicality in terms of discrete, self-identical objects: "the notion of the self-contained particle of matter, self-sufficient within its local

habitation is an abstraction.”⁸ Actual entities have the role of explaining the process of materiality.

Whitehead refers to his overall system as a philosophy of organism and, for him, all actual entities can be considered as ‘creatures’ which have both materiality and subjectivity.

The philosophies of substance presuppose a subject which then encounters a datum, and then reacts to the datum. The philosophy of organism presupposes a datum which is met with feelings, and progressively attains the unity of a subject. But with this doctrine, ‘superject’ would be a better term than ‘subject.’⁹

In order to avoid the split between the world viewed as a physical given (and hence under the purview of science) that is distinct from the analytical arena of thinking, perceiving subjects (under the purview of the humanities), Whitehead offers a reconfigured conception of subjectivity. Subjectivity is the “past hurling itself into a new transcendent fact. It is the flying dart . . . hurled beyond the bounds of the world.”¹⁰ It is the act of being thrown from the past into the future which constitutes being; the being of becoming. This will entail that at the human level, subjectivity¹¹ is not so much a question of what something or someone is, but what they are becoming and, concomitantly, what they are “ceasing to be.”¹² And, such subjectivity is not limited to humans. It is an integral element within the universe. This, therefore, widens the grasp of what it means to be a creature. However, it should be noted that Whitehead’s granting of subjectivity to all items of materiality does not entail some kind of panpsychism. As will be discussed in more detail shortly, Whitehead’s extended concept of subjectivity is designed to provide a consistent philosophical approach which views neither objects nor subjects as primary or originary. Instead, experience and experiences become his ontological fulcrum. It should also be noted that Whitehead wants to avoid any concept of an enduring subjectivity which subtends different experiences;¹³ each subject must be created anew on each occasion. “Descartes in his own philosophy conceives the

thinker as creating the occasional thought. The philosophy of organism inverts the order, and conceives the thought as a constituent operation in the creation of the occasional thinker.”¹⁴

Actual Entities: How they come to be

To summarise, Whitehead’s ontological position focuses upon process and becoming as the ultimate characterization of being and of materiality. It aims to avoid a positing of subjects or objects as the starting point for meaning or existence, instead it emphasizes flux (i.e. becoming) but moves quickly to an account of the enduring status of materiality. As such, it attempts to circumvent the traditional distinction between the fixed objects analysed by science and the thinking or thought of human subjects as analysed by the humanities. Given that an actual entity is not a thing, as commonly conceived, and, to further complicate matters, is to be defined in terms of its process, Whitehead faces the task of offering a way into thinking about the status of such entities. His response is to state that “experience involves a becoming, that becoming means that something becomes, and that what becomes involves repetition transformed into novel immediacy.”¹⁵ For Whitehead, the emphasis is upon the ‘how’ of becoming. Being is neither located in the object itself nor in the subject which perceives it. This leaves becoming as primary. But this is not an inert becoming: it is not the mere passage of matter in flux. The key to Whitehead’s concept of becoming is that each becoming occurs in a specific environment and in a specific fashion. That which both enables becoming and differentiates this becoming from any other is the way in which the becoming unfolds. In order to account for this prioritisation of the how of becoming, Whitehead introduces the notion of prehensions. Literally, this term refers to how an actual entity grasps its environment. Prehensions are crucial element within the Whiteheadian framework. They are the means by which he explains the utterly relational character of existence; they describe the passage by which all entities are related. “I use the term ‘prehension’ for the general way in which the occasion of experience can include, as part of its own essence, any other entity.”¹⁶ Prehensions enable Whitehead to move beyond simplistic descriptions of a

world divided into subjects and objects and serve as the basis for his description of the process whereby materiality and physicality come to be. Instead, prehensions enable the description of the complexity of the process whereby subjects are both created and create themselves through the assimilation of previously diverse elements. It is in this respect that he states that every prehension consists of three factors: (a) the 'subject' which is prehending, namely, the actual entity in which that prehension is a concrete element; (b) the 'datum' which is prehended; (c) the 'subjective form' which is how that subject prehends that datum.

Hence, Whitehead's theory of the divisibility of actual entities into prehensions might be characterized as follows¹⁷: 'Someone is listening to some music produced through a CD player.' The main prehensions here, according to Whitehead's schema described above are:

- (a) the person listening to the music
- (b) the music that is being listened to
- (c) the manner in which the music is being listened to

None of these elements comprises either an object or a subject as they are elements within the process which goes to make up an actual entity. So it is not a person (or a someone) in terms of a subject who is listening. The music that is being listened to is an integral element within the formation of that subject.¹⁸ Further, it is not simply an admixture of the music and the person which makes up the subject. The crucial element is the way in which the music is received. For example, the listener is receiving the music in an inattentive way; one is becoming bored. Or, the listener is receiving the music in a relaxed manner; one is becoming tired.

There is also an emphasis on the materiality of such prehensions. This follows from Whitehead's denial of the pre-existence of a listening subject, and his emphasis on the music as an integral element within the process of the real constitution of that subject. Whitehead also stresses the manner in which these elements are combined or integrated. None of the elements of the process is separate, nor do they have any ontological priority; they all go together to create

the specific subject, for example, a bored listener. Of course, this is to greatly over-simplify (and to leap from the metaphysical to the human rather too quickly, perhaps) in order to make an explanatory point. It is envisaged as the barest sketch of Whitehead's ideas. For example, what if the person is sitting in an uncomfortable chair, or can smell fresh coffee, or is eating bitter chocolate, or the light is too bright? These will all influence not only the manner in which the music is received but the range of prehensions available, which in turn will both limit and extend the range of potential outcomes (subjects/superjects). However, what is crucial in this example is the utter integration of the prehension and the subject, and their indissolubility in terms of their actual existence.

At the same time, Whitehead is not interested in simply describing the coming into existence of single entities, of one subject or superject. His ontology is one which emphasizes the individuality of all becoming but only insofar as each becoming is situated within and emerges from a wider complex of becoming. This wider complex is termed, by Whitehead 'the extensive continuum'.

The Extensive Continuum

"This extensive continuum is one relational complexIt underlies the whole world, past present and future."¹⁹ Such a statement may seem to express a foundationalist or essentialist perspective, in that it appears to characterize the extensive continuum as a ground subtending all existence. This might seem to run the danger of positing a fixed, external, inert ground replete with objects, similar to that presumed by much of conventional science. However, such is certainly not Whitehead's position, as indicated by the term relational. He also states: "It [the extensive continuum] is not a fact prior to the world."²⁰ For Whitehead, this extensive continuum is infinite, in that it is not bounded or determined by any other element. It is "'real' because it expresses a fact derived from the actual world and concerning the actual contemporary world. All actual entities are related according to the determinations of this continuum."²¹ It might be said that the concept of the extensive continuum is part of Whitehead's

on-going development of his earlier work on relativity within a wider philosophical scheme.²²

The facticity of this reality results from the extensive continuum being comprised wholly of actual entities: “Actual entities atomize the extensive continuum.”²³ However, the extensive continuum considered as an agglomeration of actual entities refers to actual entities not in terms of process, in terms of their becoming but in terms of their already having become. In his initial summary of his philosophy of organism, Whitehead states that, “actual entities ‘perpetually perish’²⁴ subjectively, but are immortal objectively.”²⁵ An actual entity’s being lasts only as long as its becoming. When it has become it dies; insofar as it is no longer becoming, it no longer has any being. But this does not mean that it disappears. On the contrary, it then becomes an element in the potential creation of new entities, it is established as an element which new becomings may use as the data for their own becoming. As such it passes from being a subject to being an object. “Thus subject and object are relative terms.”²⁶ It is in this latter sense that an actual entity acquires objective immortality and as such constitutes an element within the extensive continuum.

Following his explicit attempt to prioritise ‘stubborn fact’, Whitehead returns to the becoming of actual entities. In this respect the extensive continuum operates as a field of potential for the becoming of an actual entity: “In the mere continuum there are contrary potentialities; in the actual world there are definite atomic actualities determining one coherent system of real divisions throughout the region of actuality.”²⁷ Thus, a distinction must be made between the abstract notion of potentiality, as that which informs the process and creativity of the universe (i.e. the mere continuum), and the region of actuality. For it is the latter which comprises the contemporary actualizations of such potentiality within which the creation of actual entities occur. This means that although Whitehead posits an unlimited potentiality throughout the universe, the real actualizations of such potentiality occur in reference to a world which is in some way bounded. This is Whitehead’s renewed conception of nature which is intended to replace that which predominates within much of science, social

theory and the humanities. The whole of nature has now become the realm of inter-related experiences of subjects (superjects). However, Whitehead makes it clear that his position is not some simple refusal or denial of science: “I assume as an axiom that science is not a fairy tale.”²⁸ Instead, his ontology (and that of Deleuze) emphasizes the need to develop theoretical approaches which can describe the complex inter-relations of reality and the process by which materiality is attained. A further discussion of this will be developed later through an analysis of the virtual and the actual.

The analysis so far has outlined Whitehead’s ontological position; his attempts to balance facticity and becoming, individuality and extensivity, materiality and subjectivity. The remainder of the paper will attempt to develop these themes through a comparison of his work with that of Deleuze. It will commence by outlining Deleuze’s usage of the term ‘singularities’ with a view to considering their similarity to Whitehead’s ‘actual entities’. This will establish the role that each plays in the development of a non-essentialist ontology.

Introducing Singularities

As stated previously, it has often been the case that commentators have stressed the status of flux, flow and becoming in the work of Deleuze. This paper holds that such an over-emphasis is mistaken. In order to substantiate that claim and to outline the status of materiality/physicality within Deleuze’s texts, and also as a first move in delineating the similarities between his work and that of Whitehead, it is necessary to focus on his notion of singularities.

In an introductory reference, Deleuze states that “Beneath the general operation of laws...there always remains the play of singularities.”²⁹ This asserts their status as that which is not captured or explainable by customary descriptions of the world as a generally well-ordered place. It also hints at their metaphysical priority. This is developed when Deleuze obliquely argues that they cannot be contained or described by concepts and that they differ among themselves, indeed they are harbingers of difference. “Specific difference . . . in no way

represents a universal concept (that is to say, an Idea) encompassing all the singularities and turnings of difference.”³⁰

This is a negative definition, in that it says how singularities are not immediately linked to concepts but does not positively describe the relation between concepts and singularities. This negative form of definition continues when Deleuze states that “Singularity is beyond particular propositions no less than universality is beyond particular propositions.”³¹ Yet, singularities are crucial in the role they play within Deleuze’s work. And this role is to account for differential distribution within what Deleuze terms the virtual, which is not actualized as different, is not yet individuated. Thus: “the distribution of singularities belongs entirely to the conditions of the problem, while their specification already refers to solutions constructed under these conditions The problem is at once transcendent and immanent in relation to these solutions.”³² Materiality is something that is attained through actualization and in relation to the set of ‘real’ conditions within which and from which it arises. In Whiteheadian terms, there is no indifferent relation between the extensive continuum and the actual entities which arise out of it. Thus, in a short passage which echoes the work of Whitehead: “This is how, in the case of the organic, the process of actualisation appears simultaneously as the local differentiation of parts, the global formation of an internal milieu, and the solution of a problem posed within the field of constitution of an organism.

Once again, there is no strict definition of singularities, it is not possible to work out what they are. Just as actual entities play a precise role in Whitehead’s theory, so singularities play a specific role in Deleuze’s.³³ For, as with Whitehead’s actual entities, they are never encountered as such.³⁴ Singularities are that which becomes problematised and which consequently constitute individuality; in themselves they are not individuals in the usual sense, as such individuals are resultants.

Singularities don’t express the solidity of objects, they do not exhibit the reality of Newtonian self-identical things. Rather, they express reality as qualitative

difference. “Singularity and intensity are terms used to articulate a thought robbed of the organizing principle of the individual.”³⁵ In the same vein as Whitehead when he characterizes his “epochal theory of time” in terms of quanta—literally packages or pulses of time, superseding each other—the reality of such singularities does not rely upon quantitative distinctions; instead, singularities are different and distinguishable in terms of their intensity - they are quanta³⁶. The role of singularities is to provide “a prior metastable state . . . the existence of a ‘disparateness’ . . . between which potentials are distributed.”³⁷ This is not yet a description of singularities, rather it is a description of an intensive field, a plane of immanence, an extensive continuum. For, like Whitehead’s extensive continuum, such a field is not a flat, uniform or passive expanse. There are specificities here but they are not individual, they are singularities: “Such a pre-individual state nevertheless does not lack singularities: the distinctive or singular points are defined by the existence and distribution of potentials. An ‘objective’ problematic field thus appears.”³⁸ Reality is an undulating plane, this applies no less to that reality which science devotes itself to. A recognition of this (by science) might lead, not to a disbaring of science, but to better, fuller scientific accounts; though this may involve developing a different understanding and practice of science.³⁹

Deleuze’s objective problematic field describes the relations between elements which are not yet actual (although for Whitehead they would once have been actual). However, they are still real but not in the sense of being thing-like. This does not mean that such a field is an inert substrate upon which actuality bases itself, for this field is constituted through the inter-relation of potentials. Just as Whitehead attempts to dispel the notion of indifferent matter which awaits perception or constitution, Deleuze posits a field of differentiated but inter-related, intensive singulars which express potentiality.

For Whitehead, that which permeates and explains this processual relation of the extensive continuum to the actual entities which arise out of it is the concept of creativity. “Creativity is the principle of novelty. An actual occasion is a novel entity diverse from any entity in the ‘many’ that it unifies. It is that ultimate

principle by which the many, which are the universe disjunctively, become the one actual occasion, which is the universe conjunctively. The 'creative advance' is the application of this ultimate principle of creativity to each novel situation which it originates."⁴⁰ However, Whitehead also stresses the importance of repetition within this more general scheme. That is to say, this novelty is not entirely new, as, within each becoming novel there is a dual repetition. The first repetition is the repetition of becoming itself. The second is that what becomes, in itself, repeats the universe in a novel way. As seen earlier, Whitehead puts it as follows: "These various aspects can be summed up in the statement that experience involves a becoming, that becoming means that something becomes, and that what becomes involves repetition transformed into novel immediacy."⁴¹ So, novelty expresses difference, the category of creativity encapsulates difference; it gives it its own concept.

For Deleuze, it is Nietzsche rather than Whitehead, who is the writer who has done most to further this idea through his notion of eternal return. Yet it is notable that this reading of Nietzsche fits closely with the previous analysis of Whitehead. Hence, "Returning is being, but only the being of becoming. The eternal return does not bring back 'the same', but returning constitutes the only Same of that which becomes. Returning is the becoming-identical of becoming itself."⁴² So, returning has the same role for Deleuze as creativity does for Whitehead: "The wheel in the eternal return is at once both production of repetition on the basis of difference and selection of difference on the basis of repetition."⁴³ However, this is not some simple, serial becoming which dissipates the universe into a Heraclitean flux. Consistent instead with Whitehead's "epochal theory of time," Deleuze manages to avoid such dissipation through his introduction of the distinction between the virtual and the actual. These concepts play a vital role within his work, and will be addressed throughout the remainder of this paper.

The Virtual and The Actual

"The virtual is opposed not to the real but to the actual. The virtual is fully real

in so far as it is virtual. Exactly what Proust said of states of resonance must be said of the virtual: 'Real without being actual, ideal without being abstract'; and symbolic without being fictional. Indeed, the virtual must be defined as strictly a part of the real object--as though the object had one part of itself in the virtual into which it plunged as though into an objective dimension."⁴⁴

It would seem that the work of Whitehead could be helpful in refuting Alain Badiou's claim that either the actual or the virtual must be granted precedence in terms of their claims to reality.⁴⁵ It is Whitehead's notion of the extensive continuum which most closely corresponds to that of the virtual. Most especially, it is his discussion of the process of the creation of actual entities out of such a continuum and the return of these entities into the continuum as constituting the being of becoming that will help elucidate how the virtual and the actual can both be equally real and yet separate. Whitehead clearly states that the extensive continuum, in itself, is real but not actual, and that the extensive continuum does not correspond to, nor is it exhausted by, its actualization by actual entities; though once the extensive continuum (or the virtual) is actualized, it ceases to be virtual. "Thus though everything is real, it is not necessarily realized in some particular set of actual occasions."⁴⁶ So, although Whitehead does not use the term virtual, this extensive continuum could be said to be virtual in the sense that "virtualities exist in such a way that they actualize themselves in splitting up and being divided."⁴⁷

"When the virtual content of an Idea is actualised, the varieties of relation are incarnated in distinct species while the singular points which correspond to the values of one variety are incarnated in the distinct parts characteristic of this or that species. The Idea of colour, for example, is like white light which perplicates itself in the genetic elements and the relations of all the colours, but is actualised in the diverse colours with their respective spaces There is even a white society and a white language, the latter being that which contains in its virtuality all the phonemes and relations destined to be actualised in diverse languages and in the distinctive parts of a given language "⁴⁸

Perhaps, regarding this somewhat difficult passage from a Whiteheadian perspective will both produce clarity and demonstrate the importance of reading Deleuze through Whitehead (and vice versa). However, before doing so, it remains necessary to introduce one of Whitehead's more difficult technical terms, namely, eternal objects. Although eternal objects play a complex and somewhat disputed role in Whitehead's work, it is clear that he intends the term to describe the relation which the utter potentiality of the universe bears to the facticity of actual entities. Hence: "The eternal objects are the pure potentials of the universe; and the actual entities differ from each other in their realization of potentials."⁴⁹ As such (and to return to the long Deleuze quote above), colors, as eternal objects, express the potentiality which informs nascent items of matter (actual entities). Eternal objects are complex and relational, and are always associated with the conceptual aspect of becoming (they are hence closely related to the Deleuzian concept of Idea). They are real but do not exist until they ingress in particular becomings (until they are actualised, hence moving from virtual to actual through the process of incarnating matter). Such actualisation is not random, it is affected by the environment and the past of the actual entities into which they ingress. Colours are always prehended in a certain way. The way in which this happens depends upon the structuring of the organism in question. Thus, although whiteness itself exhibits a continuity (there is a white society) the manner in which it is felt will differ from organism to organism.

All subjects are alive, in that they receive and reformulate the extensive continuum and all communicate with each other within the extensive continuum, yet they are also all different. So any description of how they feel and assimilate eternal objects cannot be limited to human language. That is to say, although human language is clearly, in itself, communicatory, both Whitehead and Deleuze insist that there are other forms of communication which are integral to existence. This is the role of prehensions, as discussed earlier; they keep what might appear as discrete in touch with other elements in the extensive continuum. "Each atom is a system of all things."⁵⁰ Therefore

language is one form of communication amongst many. Hence, Deleuze asserts that whiteness comprises, in its virtuality, all the potential of being white, which will always be actualised differently according to the individual which incarnates whiteness. Language is not to be distrusted, but is itself to be seen as diverse.

As such, there will be different languages for different entities or assemblages of entities. Also, within any language there will be distinctions and divisions which enable singularities to pass into individuals. It is at this point that the work of Whitehead and Deleuze become especially pertinent for analyses of the relations between materiality and subjectivity, and for developing a non-essentialist ontology. Now individuation becomes a matter of division. And this division is not merely physical (biological division into categories such as species, genus, anatomical difference) but conceptual, in the Whiteheadian and Deleuzean sense. That is, it is not simple social constructionism (the way different societies or cultures grant different meanings to certain given factors--Margaret Mead's work, for example). Nor is it complex social constructionism (where matter is denigrated or made inaccessible through the priority of a signifying system or cultural intelligibility⁵¹). Whitehead and Deleuze manage to establish a non-essentialist ontology by insisting upon the reality of both the extensive continuum or the virtual, and the actuality of contemporary existence. Neither the extensive continuum nor the virtual provide an absolute ground for existence; they express a limited yet infinite potentiality which is neither fully exhausted nor realized by those individuals which arise out of it. As stated above, this applies not only to philosophy but also to science; for surely science has always been resolutely ontological.

Hence, matter, meaning, subjectivity and sense all happen at once. They are neither social nor material; nor are they ultimately reducible to either one or the other. The two sides are needed together. Hence social divisions are material divisions and vice versa. They cannot be separated. Even this is too simplistic, however, for within such a scheme, neither the material or the social retain their usual sense. This is both the demand and the difficulty that Whitehead and

Deleuze offer contemporary theory. I shall take up this demand with a 'concrete' example in the conclusion to this paper.

Conclusion

Just as Whitehead's philosophy is imbued with the idea of process (of the going beyond each actual occasion), for Deleuze, actualization is never a complete rendering of the virtual:

events of the surface are actualized in the present of bodies . . . by imprisoning first their singularities within the limits of worlds, individuals and persons. There is also another movement wherein the event implies something excessive in relation to its actualization, something that overthrows worlds, individuals and persons, and leaves them to the depth of the ground which works and dissolves them.⁵²

As has been seen, process, or the move from the virtual to the actual, never exhausts the creativity, force, or power which characterizes the total implication of matter and subjectivity in each other. Over and beyond immediate actualizations of events in contemporary bodies, there remains the force of the eventfulness of the universe which creates the future and the past in distinction to the present. (This is akin to Whitehead's notion of creativity as discussed earlier.)

Moving away from the problem posed by scientific accounts which suppose a fixed, external world, I now turn to the problem of the status of the human subject which is often taken to survey such a world. This is not a problem for Whitehead and Deleuze insofar as they view the world as neither flat nor given. Hence, the subject does not exist prior to its orientation and instantiation in relation to its wider environment. With regard to the status of subjectivity within such a process (see endnotes 11 and 18), both Whitehead and Deleuze, would deny any absolute interiority to such subjectivity; however, they would still make a distinction between the inside and the outside. "The outside is not a

fixed limit but a moving matter animated by peristaltic movements, folds and foldings that together make up an inside: they are not something other than the outside, but precisely the inside of the outside.”⁵³ In this sense, the outside works in a similar way to Whitehead’s extensive continuum. It is out of this that subjects are created. This does not mean that such subjects have an inside which is of a different kind to the rest of being. These are not subjects as opposed to objects. The foldings which comprise subjectivity are temporary renderings of an outside. They are the public made private only insofar as this privacy will become public again.⁵⁴ Subjectivity is a moment and a place within the ongoing movement of a wider field, namely the virtual or the extensive continuum. For Deleuze, such subjectivity is characterized in terms of a fold.⁵⁵ Thus, each subject or fold is a social, physical and historical rendering: social in that it incorporates elements of the public into a singular entity; physical in that it is an actual rendering of elements of the universe; historical in that its formation arises from the prior and particular arrangement of previous folds, and problems within which it is situated. As Whitehead also puts it, the world comprises a “circumambient space of social physical activity.”⁵⁶ There is hence no genuine distinction between the material and the social, between subjects and objects; all existence is a complex combination of the two. The gulf between nature as the province of science and the inter-relation of subjects as the province of social theory (and the humanities) has been overcome. I shall conclude with a tentative example of how the work of Whitehead and Deleuze could be deployed within sociology.

Just as some commentators a Deleuzian analysis limited to tracing flows, flights and deterritorialization, and reveling in fluidity, there is the parallel danger of focusing exclusively on Whitehead’s emphasis on process. But it is clear that, contrary to any such readings, both philosophers simply view the universe as eventful. Subjects and objects do appear within this eventfulness but they are neither primary nor originary. As such, Whitehead and Deleuze’s emphasis on becoming and process could be used to investigate contemporary forms of actualization, not just the distinctive mobility of contemporary society.

For example, within current sociology and anthropology, the social is often considered to be some form of a flow.⁵⁷ Appadurai⁵⁸, in particular, presents migration as one of a series of disjunctive spaces of flow, which together constitute the global cultural economy. But this is only half the story; it remains at the level of the virtual. It is possible to utilise the work of Whitehead and Deleuze to broaden the scope of such analyses. For viewing migration as an event within the process of existence is equivalent to regarding it as a resultant of the inter-relation of a variety of singularities. But migration is always actualized in states of affairs and bodies. Contemporary analyses should examine the actualizations of such becomings in terms of the fixing of the virtual into the present, and the actualization of the event into concrete states of affairs and bodies. These actualizations will take the form of classifying and discriminating singularities into individual bodies; so that they are physically rendered, for instance, as either a tourist, a refugee or an asylum seeker. These are not just labels or categories. They are the hard, physical, manifestation in individualized bodies. The event is thereby actualized in such a manner that singularities are individuated and ordered into groups in which they are deemed to be the same; thereby disavowing the difference within and between them, the difference that constitutes them in their becomings. That is to say, a major aspect of the present in the UK of the early twenty-first century is the necessity to be physically actualized as a citizen, visitor, genuine applicant for residency, or illegal entrant. These are not the only actualizations; there are others which cut across the space and time of the same individuated body and yet are actualized within a different body. However, it will be possible to trace the history that links such different actualizations to the previously individuated body.

On this view, individual subjectivity must be regarded as a twisting of a social, physical environment. The physicality in question does not limit the body to its own immediacy, its genes, molecules, cells and so on, but opens it up, through the re-conceptualization of the physical; that is to say, the conceptual is to be seen as an integral element of the physical. “It is even this twisting which defines ‘Flesh’, beyond the body proper and its objects”⁵⁹: “we cannot tell with

what molecules the body ends and the external world begins.”⁶⁰ But this is not a dispersal of the body, to the extent that individual renderings of it become lost in a wider universe of flux. Instead, it is a question of eliciting both the dispersion and the sedimentation of the body, as well as of subjectivity, with regard to the wider social and physical environment. Such eliciting are not simply cultural descriptions of an already existent physical field. Rather, they would constitute the description and re-description of the folds that constitute contemporary subjectivity.

Clearly descriptions of this sort would require a subtle account of the inter-relation of materiality and subjectivity, if they are to engage fully with the physicality of the body. However, in order not to fall back into some form of essentialism, it is necessary that they utilise a non-essentialist ontology. As such, it is hoped that by focusing on the inter-relation of Whitehead and Deleuze, this paper has provided a way of furthering such analyses. That Whitehead and Deleuze may be seen as providing a way of approaching the process of attaining materiality/physicality in a social environment which is neither counter-posed to a natural environment nor reducible to any strict scientific conception of a fixed, external, object-filled universe.

Endnotes

¹ Alfred N. Whitehead, Modes of Thought (Cambridge: Cambridge University Press, 1938) p. 183.

² A good introduction to the similarities of the philosophical approaches of Whitehead and Deleuze can be found in Arnaud Villani, 'Deleuze et Whitehead,' Revue de Métaphysique et de Morale, 101ème année/No. 2, Avril-Juin 1996: 245-265.

³ Karen Barad, 'Getting Real: Technoscientific Practices and the Materialization of Reality,' in differences: A Journal of Feminist Cultural Studies, 10: 2 (1998): 87-128. Mariam Fraser, 'What is the matter of feminist criticism?,' Economy and Society 31: 4 (2002): 606-625. Vicky Kirby, Telling Flesh. The Substance of the Corporeal, (London, Routledge, 1997).

⁴ Gilles Deleuze, Nietzsche and Philosophy, (London: Athlone Press, 1983), p. 23.

⁵ Alfred N. Whitehead, Process and Reality. An Essay In Cosmology, corrected edition (eds. Griffin, D. and Sherburne, D.) (New York: The Free Press, 1978), p. xiv and passim.

⁶ Ibid. p. 18.

⁷ Ibid. pp. 25-6.

⁸ Whitehead, Modes, p. 189.

⁹ Whitehead, Process, p. 155.

¹⁰ Alfred N. Whitehead, Adventures of Ideas, (New York: The Free Press, 1967), p. 177.

¹¹ It should be noted that, technically speaking, Whitehead does not view human subjectivity as directly describable in terms of superjectivity. However, the process by which different human subjects come to be is analogous to it, though he would prefer to situate such becomings within his theory of propositions. Whitehead, Process, pp. 256-82. Whitehead's theory of propositions has not been introduced in this paper for simplicity's sake.

¹² Gilles Deleuze and Felix Guattari, What is Philosophy? (London: Verso, 1994), p. 112.

¹³ Whitehead does provide an account of endurance but it is not premised on traditional conceptions of subjectivity.

¹⁴ Whitehead, Process, p. 151.

¹⁵ Ibid. pp. 136-7.

¹⁶ Whitehead, Adventures, p. 234.

¹⁷ See Whitehead's discussion of the process of the hearing of music. Whitehead, Process, pp. 233-5.

¹⁸ With regard to the use of subject here, it should be noted that, in deploying the term, I follow Whitehead when he states: "The term 'subject' has been retained because in this sense it is familiar in philosophy. But it is misleading. The term 'superject' would be better." Whitehead, Process, p. 222. Hence, subject will be used intermittently and interchangeably with superject in order to avoid over-use of terminology. But, for the most part, subject should be read as superject.

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- ¹⁹ Whitehead, Process, p. 66.
- ²⁰ Ibid. p. 66.
- ²¹ Ibid. p. 66.
- ²² Alfred N. Whitehead, The Principle of Relativity with applications to Physical Science, (Cambridge: Cambridge University Press, 1922).
- ²³ Whitehead, Process, p. 67
- ²⁴ This is a term that Whitehead borrows from Locke. Whitehead, Process, pp. 51-60.
- ²⁵ Whitehead, Process, p. 29.
- ²⁶ Whitehead, Adventures, p. 176.
- ²⁷ Whitehead, Process, p. 67.
- ²⁸ Whitehead, Concept, p. 40.
- ²⁹ Gilles Deleuze, Difference and Repetition, (London: Athlone Press, 1994), p. 21.
- ³⁰ Ibid. pp. 31-2.
- ³¹ Ibid. p. 163.
- ³² Ibid. p. 163.
- ³³ I am grateful to Eric Alliez for confirming, to me, the similarity between Whitehead's actual entities and Deleuze's singularities and their importance for establishing a non-essentialist ontology.
- ³⁴ Although, in one of his final texts, Deleuze does give the following, intriguing example: "very small children all resemble one another and have hardly any individuality, but they have singularities: a smile, a gesture, a funny face." Gilles Deleuze, Pure Immanence. Essays on a Life, (New York: Zone Books), p. 30.
- ³⁵ Nick Millett, 'The Trick of Singularity' Theory, Culture and Society, 14:2 (1997): 54.
- ³⁶ Whitehead, Process, p. 286.
- ³⁷ Deleuze, Difference, p. 246.
- ³⁸ Ibid. p. 246.
- ³⁹ Manuel Delanda, Intensive Science and Virtual Philosophy, (London: Continuum Press, 2002). Isabelle Stengers, Penser Avec Whitehead, (Paris: Editions de Seuil, 2002).
- ⁴⁰ Whitehead, Process, p. 21.
- ⁴¹ Ibid. pp. 136-7.
- ⁴² Deleuze, Difference, p. 41.
- ⁴³ Ibid. p. 42.

⁴⁴ Ibid. pp. 208-9.

⁴⁵ Alain Badiou, Deleuze. The Clamor of Being, (Minneapolis: University of Minnesota Press, 2000), pp. 48-53.

⁴⁶ Whitehead, Adventures, p. 197. Deleuze would substitute virtual for real here.

⁴⁷ Boundas, Deleuze-Bergson, p. 91.

⁴⁸ Deleuze, Difference, p. 206.

⁴⁹ Whitehead, Process, p. 149.

⁵⁰ Ibid. p. 36.

⁵¹ For example: Judith Butler, Bodies that Matter: on the discursive limits of 'sex', (New York and London: Routledge, 1993).

⁵² Gilles Deleuze, The Logic of Sense, (New York: Athlone Press, 1990), pp. 167-8.

⁵³ Gilles Deleuze, Foucault, (Minneapolis: University of Minnesota Press, 1988), pp. 96-7.

⁵⁴ See, Whitehead, Process, pp. 289-90.

⁵⁵ See, Deleuze, Foucault, pp. 93-123 and Gilles Deleuze, The Fold. Leibniz and the Baroque, (London: Athlone Press, 1993).

⁵⁶ Whitehead, Adventures, p. 206.

⁵⁷ For example: John Urry, Sociology Beyond Societies. Mobilities for the twenty-first century, (London: Routledge, 2000).

⁵⁸ For example: Arjun Appadurai, 'Disjuncture and Difference in the Global Cultural Economy,' Theory, Culture and Culture 7:2-3 (1990): 295-310.

⁵⁹ Deleuze, Foucault, p. 110.

⁶⁰ Whitehead, Adventures, p. 225.