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Re(con)figuring the ethico-onto-epistemological question of matter

**Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*
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Meeting the Universe Halfway is an answer to the reflective methodology found in representationalist scholarship which has previously characterised not just feminist studies but social and scientific studies in general, and which presumed the separate ontological existence, however mute or devoid of agency, of the object which is being represented. The author's aim is to configure a 'diffractive methodology [...] to provide a transdisciplinary approach' (25) which cuts across 'quantum physics, science studies, the philosophy of physics, feminist theory, critical race theory, postcolonial theory, (post-) Marxist theory, and poststructuralist theory' (25). This new methodology is necessary

in order to challenge representationalism, which has, for all fields mentioned, unwanted consequences. In so doing, Barad joins the theory of new materialism, which, though still in the process of being constructed (see Sheridan, 2002; Colebrook, 2008; DeLanda, 2006), is part of a wider movement in critical theory away from theories associated with the linguistic turn. New Materialism is an epistemological/methodological trend which has entered the academic arena not as a contestation, but as one of the theoretical frames of third wave feminism (Van der Tuin, 2009), which postulates affirmative readings instead of critical ones of past theories.

Karen Barad is a professor of

feminist studies, philosophy, and history of consciousness at the University of California, Santa Cruz. She has a Ph.D. in theoretical particle physics, which forms the background to this book. Her previous work, and particularly her 2003 article, 'Posthumanist Performativity: Toward an understanding of how matter comes to matter', paves the way for this book. Drawing mainly on Bohr's philosophy of physics, as well as the work of other major theoreticians such as Foucault, Butler, Haraway, and Fernandes (among others), she develops a new 'ethico-onto-epistemological' (185) theory called 'agential realism', which is explained throughout the book, but in more detail and with practical application in chapter six. Her list of references not only demonstrates her balanced reading of current theoretical debates relevant to her agential realist account, but could also be considered essential reading for any new materialist researcher.

Meeting the universe halfway enters the academic arena in the 'transitional' period from second- to third-wave epistemologies, offering an agential realist ontology which can help feminist studies to demonstrate the 'entangled' state or complexity of 'matter'. 'Agential realism', the term that Karen Barad uses for her new ontology, is meant to provide sensitive descriptions of 'material-discursive practices' which promote differences that matter. That is to say, this ontology rejects

the foundational separation between 'object of observation' and 'observer' because this division assumes the object as passive and the observer as active. Her ontology describes the world by means of 'apparatuses' in which both object and observer, human and non-human, are connected. As such, the differences that matter are provided by the boundaries of the apparatus (140 & 148), and not just by the researcher: 'apparatuses are specific material reconfigurings of the world that do not merely emerge in time but iteratively reconfigure spacetime-matter as part of the ongoing dynamism of becoming' (142). This is why specific intra-actions (different relations produced within the apparatus) matter, the materialization of reality depends on all the entanglements and is how the world acquires its meaning (333).

The structure of the book is very complicated since the author moves back and forth in order to produce more complex explanations, although each chapter can be understood by itself since the paramount concepts are repeated throughout the book. The last two chapters are devoted to the entanglement of the philosophy of physics with social theories and, as such, are the more complicated ones for an audience which is not familiar with quantum physics. The first chapter presents the problem of the present theory and methodology, while the second one moves to her solution to this

problem: a diffractive methodology which is very precisely explained in contrast to the reflective method throughout an intra-active, yet binary, table (89-90).

Diffraction is understood by Barad as 'a material-discursive phenomenon that makes the effects of different differences evident', 'a way of understanding the world from within and as part of it' (88). It is a 'physical phenomenon' (91) which entails a commitment by the researcher to understanding 'which differences matter, how they matter, and for whom' (90). The researcher is responsible for the different practices which construct different understandings of the world. Drawing on Haraway's work with technoscience (94), Barad proposes a reading of different theories which, instead of opposing them, engages them with one another (92-3). That is to say, the researcher engages with different theories realizing affirmative readings of them in order to provide more sensible accounts of the world. Instead of looking at differences, she wants the researcher to explore boundaries since they are what provides meaning. This methodology proves to be not only an analytical tool of critical engagement (as traditional methodologies are), but also part of the 'phenomenon', or object of investigation, since instruments of investigation produce differences that matter in the results. It helps to explain power relationships and how they are entangled in bodies,

subjectivities and identities (35). Making the methodology part of the object of investigation involves an awareness and inclusion of the different effects of instruments in an investigation in both human and social sciences.

In this book repetition does not become synonymous to fixity of concepts. The book can be considered a perfect materialization of Barad's own theory; concepts are entangled everywhere and their definitions are not entirely stable. For example, the elements intra-acting are sometimes described as 'agencies' (333) and sometimes as 'components' (269). In addition, the many neologisms required to describe the apparatus (such as 'intra-action'), can further complicate reading of this book. Though these difficulties are to some extent resolved after reading the whole book, they can cause reader to have doubts about what is meant by 'phenomena', 'apparatuses' and 'agential cuts'. In other words, reading and re-reading of the entire book is beneficial for understanding Barad's ideas in their full complexity. Ideally, clearness goes hand in hand with conciseness - something which is occasionally missing in this book.

To conclude I would like to turn towards one of the most controversial aspects of Barad's work which she tries to clarify throughout this book: her take on language. This issue has created a strong debate between some new materialists who

follow Barad's agential realism and some poststructuralists in feminist epistemology (see Ahmed 2008). It is true that strong negative attributes attached to Language (with a capital L) pervade her work. However, this is focused on the erroneous conception of language as a mediator by representationalism (470, n. 41). Instead, language is seen here as part of the apparatus (205); it is another entangled agency as important as the rest in configuring the phenomena itself since matter and meaning are always inseparable (as highlighted by the subtitle of this volume). Thus, matter is made out and understood through language and so is language for matter.

This book is valuable not only for understanding new materialist theory in general, but also for rethinking perceptions of dichotomies such as nature/culture, subject/object or reality/representation. In addition, it provides us with a new ontology based on previous social and scientific theories. It is a move towards the present new paradigm which allows us to leave infinite paradoxical dichotomies which often (and especially in posthumanist accounts) have stopped feminism, and social movements in general, in their political fight.

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