

# Karen Barad

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Karen Barad	
Occupation	professor, theoretical physicist, feminist theorist

**Karen Barad** (born April, 1956) is best known for her theory of Agential Realism. She is currently Professor of Feminist Studies, Philosophy, and History of Consciousness at the University of California, Santa Cruz.<sup>[1]</sup> She is the author of *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*.<sup>[2][3]</sup> Her research topics include feminist theory, physics, twentieth-century continental philosophy, epistemology, ontology, philosophy of physics, cultural studies of science, and feminist science studies.<sup>[4]</sup> Barad earned her Ph.D. in theoretical particle physics.

## Agential Realism

According to Barad's theory of agential realism, the world is made up of **phenomena**, which are "the ontological inseparability of intra-acting agencies". **Intra-action**, a neologism introduced by Barad, signals an important challenge to individualist metaphysics. For Barad, things or objects do not precede their interaction, rather, 'objects' emerge through particular intra-actions. Thus, apparatuses, which produce phenomena are not assemblages of humans and nonhumans (as in actor-network theory), rather they are the condition of possibility of 'humans' and 'non-humans', not merely as ideational concepts, but in their materiality. Apparatuses are 'material-discursive' in that they produce determinate meanings and material beings while simultaneously excluding the production of others. What it means to matter is therefore always material-discursive. Barad takes her inspiration from physicist Niels Bohr, one of the founders of quantum physics. Barad's agential realism is at once an epistemology (theory of knowing), an ontology (theory of being), and an ethics. Barad coins the term onto-epistemology. Because specific practices of mattering have ethical consequences, excluding other kinds of mattering, onto-epistemological practices are always in turn onto-ethico-epistemological.

Much of Barad's scholarly work has revolved around her concept of "agential realism," and her theories hold importance for many academic fields, including science studies, STS (Science, Technology, and Society), feminist technoscience, philosophy of science, feminist theory, and, of course, physics. In addition to Bohr, her work draws a great deal on the works of Michel Foucault and Judith Butler, as demonstrated in her influential article in the feminist journal *differences*, "Getting Real: Technoscientific Practices and the Materialization of Reality." Barad's training is actually in theoretical physics, and her 2007 book, *Meeting the Universe Halfway*, includes a chapter that contains an original discovery in theoretical physics, which is largely unheard of in books that are usually categorized as 'gender studies' or 'cultural theory' books. In this book, Barad also argues that 'agential realism,' is useful to the analysis of literature, social inequalities, and many other things. This claim is based on the fact that Barad's agential realism is a way of understanding the politics, ethics, and agencies of any act of observation, and indeed any kind of knowledge practice. According to Barad, the deeply connected way that everything is entangled with everything else means that any act of observation makes a "cut" between what is included and excluded from what is being considered. Nothing is inherently separate from anything else, but separations are temporarily enacted so one can examine something long enough to gain knowledge about it. This view of knowledge provides a framework for thinking about how culture and habits of thought can make some things visible and other things easier to ignore or to never see. For this reason, according to Barad, agential realism is useful for any kind of feminist analysis, even if the connection to science is not apparent.

Barad's framework makes several other arguments, and some of them are part of larger trends in fields such as science studies and feminist technoscience (all can be found in her 2007 book, *Meeting the Universe Halfway*):

- She defines agency as a relationship and not as something that one "has."
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- The scientist is always part of the apparatus, and one needs to understand that in order to make scientific work more accurate and more rigorous. This differs from the view that political critiques of science seek to undermine the credibility of science; instead, Barad argues that this kind of critique actually makes for better, more credible science.
- She argues that politics and ethical issues are always part of scientific work, and only are made to seem separate by specific historical circumstances that encourage people to fail to see those connections. She uses the example of the ethics of developing nuclear weapons to argue this point, by claiming that the ethics and politics are part of how such weapons were developed and understood, and therefore part of science, and not merely of the "philosophy of science" or the "ethics of science." This differs from the usual view that one can strive for a politics-free, bias-less science.
- Nevertheless, she argues against moral relativism, which, according to Barad, uses science's "human" aspects as an excuse to treat all knowledge, and all ethical frameworks, as equally false. She uses Michael Frayn's play, *Copenhagen*, as an example of the kind of moral relativism that she finds problematic.
- She also rejects the idea that science is "only" a language game or set of fictions produced only by human constructions and concepts. Although the scientist is part of the "intra-action" of the experiment, humans (and their cultural constructs) do not have complete control over everything that happens. Barad expresses this point by saying, in *Getting Real*, that although scientists shape knowledge about the universe, you can't ignore the way the universe "kicks back."

These points on science, agency, ethics, and knowledge reveal that Barad's work is similar to the projects of other science studies scholars such as Bruno Latour, Donna Haraway, Andrew Pickering, and Evelyn Fox Keller.

Karen Barad is currently at the University of California Santa Cruz. According to the University's web page for her, "Karen Barad is Professor of Feminist Studies, Philosophy, and History of Consciousness at the University of California at Santa Cruz. Her Ph.D. is in theoretical particle physics. She held a tenured appointment in a physics department before moving into more interdisciplinary spaces. She is the author of *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Duke University Press, 2007) and numerous articles in the fields of physics, philosophy, science studies, poststructuralist theory, and feminist theory. Her research has been supported by the National Science Foundation, the Ford Foundation, the Hughes Foundation, the Irvine Foundation, the Mellon Foundation, and the National Endowment for the Humanities. She is the Co-Director of the Science & Justice Graduate Training Program at UCSC."

## Publications

- *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Duke University Press, 2007
- "Posthumanist Performativity: How Matter Comes to Matter" (originally published in *Signs* in 2003, reprinted in various anthologies)
- "Getting Real: Technoscientific Practices and the Materialization of Reality (published in *differences* in 1998)
- "Re(con)figuring Space, Time, and Matter," in *Feminist Locations* (2001)
- "Reconceiving Scientific Literacy as Agential Literacy, or Learning How to Intra-act Responsibly Within the World," in *Doing Culture + Science*, edited by Roddey Reid and Sharon Traweek (2000)
- "Agential Realism: Feminist Interventions in Understanding Scientific Practices," in *The Science Studies Reader*, edited by Mario Biagioli (1998)
- "Meeting the Universe Halfway: Realism and Social Constructivism Without Contradiction," in *Feminism, Science, and the Philosophy of Science*, edited by Lynn Hankinson Nelson and Jack Nelson (1996)

## References

- [1] UC Santa Cruz - Feminist Studies ([http://feministstudies.ucsc.edu/faculty/ singleton.php?& singleton=true& cruz\\_id=kbarad](http://feministstudies.ucsc.edu/faculty/ singleton.php?& singleton=true& cruz_id=kbarad))
- [2] Books at Duke University Press (<http://www.dukeupress.edu/books.php3?isbn=978-0-8223-3917-5>)
- [3] Palcom: Matterealities (<http://www.ist-palcom.org/activities/matterealities/>)
- [4] <http://unjobs.org/authors/karen-barad>

Karen Barad's UCSC web page ([http://feministstudies.ucsc.edu/faculty/ singleton.php?& singleton=true& cruz\\_id=kbarad](http://feministstudies.ucsc.edu/faculty/ singleton.php?& singleton=true& cruz_id=kbarad))

## External links

- Joseph Rouse's discussion of her agential realism, available on MUSE (<http://muse.jhu.edu/login?uri=/journals/hypatia/v019/19.1rouse.pdf>)
- Review of Getting Real at the Nordic Journal of Feminist and Gender Research (<http://www.tandfonline.com/doi/abs/10.1080/08038741003627062>)

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