
Nature, politics, and possibilities: a debate and discussion with David Harvey and Donna Haraway

The following is a transcript of a debate and discussion with Donna Haraway and David Harvey, conducted at a public session during the annual meeting of the Association of American Geographers in Chicago, 17 March 1995. The previous day, Donna Haraway delivered an invited lecture at the AAG entitled "Mice into wormholes: a meditation on the nature of no nature".⁽¹⁾ The debate was chaired by Neil Smith.

David Harvey It's my privilege to begin. We tried to talk beforehand about how we would organize this discussion but I think neither Donna nor I are very good organizers of this sort of thing, so we are going to speak very much the way it comes out.

But I did want to start with a few words of appreciation for the work that Donna's done over the years and I suppose the starting point for me is the strength of her political commitment. It's always there in Donna's work, and while I try also to maintain some sort of political commitment it's not always easy to do. I often find myself falling behind and thinking, "Oh, I might as well go home and sip my martini and forget about it all". And so it's great to have other people like Donna around in the academy who maintain their commitment so strongly and cheerfully. These are the people I would really want to be like; Donna is one of those people that I would always want to measure up to in that kind of way. Let me read you something from the paper that she delivered yesterday, which is the sort of throw-away line frequently found in Donna's work but which is about, is *always* about, this notion of politics and political commitment. I am going to cite it because I think it suggests a range of concerns which I would very probably agree with. She's talking about OncoMouseTM: "the question about OncoMouseTM is really this—does she contribute to deeper equality, keener appreciation of heterogeneous multiplicity, and stronger accountability for livable worlds". I find that a very strong statement, and I find myself saying yeah! right! this is the sort of politics that we are in favor of and I would want also to pursue, even though we do it in different ways.

The other thing that I've learned very much from Donna is a bit about how to pursue that kind of commitment, and there are a couple of contrasts here which are not so much contrasts of, I think, deep feeling, but contrasts of style. One of the ways I tend to work is that I plod along, working on this and this and this and this, and then getting to that and that and that, and then saying: "Look, this and that are related" [laughter] ... "and therefore there is an internal relationship between the two". And that usually takes me about 600 pages [laughter]. That is really my way of doing things. But what Donna does is she says it in one sentence ...

Haraway A 600-page sentence!

Harvey Yeah, well, 600 pages of sentences that are doing the same thing. I am amazed at her sentence structure and I wish I could write like that. I can't do it. I mean sometimes they are pretty hair-raising sentences, and sometimes people may say "What the hell's going on here?" And I sometimes share that [laughter], but she

⁽¹⁾In: Modest_Witness@Second_Millennium.FemaleMan^o Meets OncoMouseTM (Routledge, New York, 1996, forthcoming).

belong to political and intellectual communities in the American academy that have not been good, as a whole, at keeping a firm grip on the sort of relationality that I find is a motive behind David's work, in particular, and of a kind of collectivity that David belongs to and where he's from, as well.

Now, that's had a specific impact for me as a feminist theorist and as a person who does science studies, because I have been particularly interested not so much in questions of spatialization—although they have impinged on my work and on the work of other folks who are particularly interested in the sexually, racially, inflected bodies that inhabit the terrains, the spatial temporalities of the world—but I've been interested in the process that I would call corporealization, which is certainly a spatiotemporal phenomenon. Corporealization is itself the result of deep social practices, and Marxist points of view on corporealization are always necessary but never enough. And lining up different points of view—Marxist, feminist, critical race theory, critical theory of nation formation, and so forth—can't be done as if they were a series of axes which define a space that acts like a container within which things happen. We can't think of the different positions that we have inherited and tried to work with as axes, because the very metaphor produces the notion of space as a container. As David's work has insisted again and again, this is something we cannot do—to regard space and time as containers within which things happen.

Now folks from literature might very well say the same thing by saying that the distinction between context and content is exactly that kind of binary polarity, that deconstructive technique, which teaches you to seek what the conditions of that kind of binary are—how it works or how the terms construct each other and why it does you in. I think that there are serious similarities with certain currents in deconstructive thought, but I found it much more useful, much more empowering, to get at the noncontainer status of space through the kind of Marxist heritage that I learned specifically from David Harvey's work.

Now, in thinking about corporealization, that kind of commitment has had several specific consequences. It is utterly clear to me, although I have yet to write the first sentence on the point [laughter] ..., nonetheless it is crystal clear to me that the body is an accumulation strategy in the deepest sense. This is vastly more than a metaphor but less than an identity, and it has at least a 200-year history; it is coterminous with the discourse which is biology—biology as a discourse, not the thing itself. Coterminous with the discourses of biology are the construction or enclosing of the commons of our own corporeality in a specific set of property forms, which are readily alienated in the circuit of transnational capital. This is not a statement about some kind of ideology. It's not a statement about some kind of external influence on science. It's not a container within which something happens. Rather, there is some kind of deep corporealization that has gone on through the on-the-ground social practices of the constructions of the body for us in institution after institution after institution—from the body structured by economies of work and heat in the 19th century, the hierarchical organisation of the division of labor, the economy that sets up a dichotomy between the energies of the reproductive system and the energies of the nervous system, the kind of oppositional gendered bodies that perhaps organize our major biological and medical notions; and somewhere in the middle of the 20th century, the kind of command control communication intelligence bodies, the systems-theoretic bodies that emerged over approximately a twenty-year period of time between something like the late 'thirties and the mid 'fifties and which have deep material consequences and are deeply materialized instances for bodies enclosed in particular ways.

Like Emily Martin, then, I have found David's formulations in particular, but the regulation school thinkers in general, and other kinds of political economic analysis, indispensable for trying to understand the kind of enclosure of the genome in its property form—not as bad science, not as bad medicine, but as the body which we are ... like it or not, the body which is us, and the body *for* which we are accountable, not fixed by, but nonetheless live within, yet not the only body that we live within. The processes of corporealization that produce the marked racially, sexually, class, and other inflected bodies are circulating in the form of property in deep ways. In my more fundamentalist moments I wonder if I am not just becoming a kind of Marxist reductionist, which at this moment may be not such a bad idea [laughter]. But I think the impulse from David's work is to try to do this kind of thing seriously, skirting the reductionism which is always the temptation of working within these kinds of commitments.

Now, I also feel that my own formation and that of the folks with whom I'm connected cannot be accounted for outside the history of feminist movements and antiracist movements. The insistence on intersectional analysis that has been particularly suspicious of the hegemony of class explanations has been one of the things that has created sometimes fruitful, sometimes just uncomprehending tensions in our communities. In the American intellectual and political economic context, that has tended to mean various kinds of competitive split, various ways of forgetting the shared fundamental commitments and loyalties, and instead winning points off of each other because our citation networks are different or because there is some sense about primary or secondary contradictions, or various issues of that kind.

What I'd like to be able to do is rebuild—or with many other folks be part of rebuilding—our movements that produce an intersectional analysis which, in this particular political moment, is actually able to take the rhetorical offensive. We must regain convincing rhetorical ground on the American political scene, and also move beyond the United States. We must regain political ground and relearn speaking in compelling public ways, which we have pretty stunningly lost.

Now, the question that I want to end with, which is allied to David's question, "What are the conditions of geographical knowledge now, the conditions of possibility of geographical knowledge?"—the question I want to lay next to that is: "What kinds of connectivity globalize?" If one grants that the particularly caricatured way of opposing space and place, such that identities and bounded locations (things like gender or face) appear only in place, whereas only capital and class spatialize—a caricatured position I think nobody would admit that they hold, but a caricatured position which nonetheless has been used to produce arguments—if that is plainly out of the picture, nonetheless the ways that various kinds of bodies in the making and various kinds of formations spatialize are different. The questions of scale and the questions of kinds of intersection matter immensely. And I think as communities we are relatively better at knowing how spatializations through circulation of money, for example, work, than spatializations that work through the circulation of racially, sexualized bodies. So I'd like to try to think with folks today about what kinds of connectivity globalize. I have just a short list of possibilities, part of which comes out of yesterday's talk: transuranic elements globalize; transgenic organisms globalize; environmental issues globalize, always with contending contingencies and, at the very best, partially translatable heterogeneous knowledges and knowledge-making practices. Indigenous peoples formations and the formation of this curious historical subject called the "global indigenous person" globalize. Technoscience, with a vengeance, globalizes; labor movements, socialist internationals (if there are any of them left) globalize. These are the kinds of heterogeneous social practices

that actually omit the kind of webs that tie together life-worlds and force translations. I'd like to be able to talk about and specify those more richly than is presently possible.

Harvey Let me just take up a couple of those thoughts and link them with the whole question of what is geographical knowledge—how do we map the world? It seems to me that in part the answer comes out of Donna's last point that how we map the world is going to be dependent upon the way in which we look at webs of processes which are interconnected. Presumably any map of the world that comes out of that is going to be rather complicated, perhaps even more complicated than some of your best sentences [laughter]. So what we have to say to ourselves as geographers—and I'm not claiming any privilege for that—is this: “since we are concerned with things like mapping and cartographies and (using Mohanty's term) cartographies of struggle, and those cartographies are important, then how we locate and how we situate ourselves in this world becomes rather crucial”. Let me push it just a little bit further back into notions of situated knowledges. There's lots of rhetoric these days talking about “voices from the margin”; or saying “there is a space outside”; or there is a “border”—rhetoric of that sort that postulates a space of resistance. But the question that immediately poses is: “in what map of the world is that space located?”

Let me give you just one example of how this works. We can contrast someone like Raymond Williams and bell hooks. Raymond Williams has a notion of border countries and being in border country allows him a critical perspective on what is happening in Britain, British culture and so on, which is deeply implicated in everything he did. In other words, his situation on the border was somehow terribly, terribly important. But if you look at the critics of Raymond Williams, they say: “Well if I'm sitting in India suffering from British imperialism, then Raymond Williams's map of the world is just one high plateau with this little wrinkle in it called border country, which separates the South Wales miners from Cambridge University, and really it is a small wrinkle on that grand plateau of imperial exploitation”. bell hooks, in the piece about margins and spaces, talks about again trying to create a space on the margin from which criticism could be made. But then you ask: “what is her map of the world?” Well she gives you clues; it starts in the South, in African-American communities, and it works through questions of race and class and metropole and gender and the country and the city—it's a different map of the world. At this point you say: “Well, how can we somehow put these different maps of the world into conversation with each other?”

And that does involve us in thinking about the webs of systematicity and there I think Donna has, of course, raised a whole set of questions. My primary web of systematicity is always the circulation of money, and its relation to the circulation of capital. What is our situatedness in relationship to the circulation of capital? My definition of class, for example, is all about the relationship that individuals have to that circulation process so that what we have to think about then it how the systematicity of capital relates to processes like the circulation of racially marked bodies? And as Donna rightly suggests, we can't simply treat this as an alternative axis, because to do so is to suggest that space is a container and that you can isolate these two vectors within it: one is the money vector and the other is race. But I'm not quite sure how to create a fusion of the two. Got any ideas?

Haraway Well, I've got some ideas. I read a paper by Aihwa Ong, who is an anthropologist in the Bay area who has been studying Cambodian refugees. She has been studying them particularly in biomedical clinics. She has been interested in the

way that the refugees with whom she has been talking have come from a history of several modernities, one of which they are inhabiting in the San Francisco Bay area. They come from the particular modernities of Cambodia during the Pol Pot regime, of the refugee camps in transition, and of resettlement in the Bay area. All of which involve the people with whom she has been working in negotiations with different kinds of position in relation to complex aspects of their own control of their lives—you can call it agency, if you must.

Aihwa has been working out a way of talking about how their insertion in intersecting discourses produces the Cambodian refugees differently by generation and by gender, inside and through the experience of the medical clinic—that is the mechanism of disciplinization—positioning them in specific raced positions, taking on the United States versions of racial formation, which were not their own versions of ethnic differentiation prior to coming to the United States. Their identities are specifically racialized and in a particular class location, in relationship to the apparatus of Medicaid, the welfare apparatus and the neighborhood apparatus, the differentiation of the kids in the school scene, parents and older people, the various generational issues involved in the community. So she ends up drawing this remarkably complicated but very full, rich—it's complicated but not in the sense of especially abstract—this map of the formation of a whole population of people in a particular region is gendered, generationalized, nationalized, classed, bodied terms, in locations that are always in the making. So the people involved are also actors in the process but never in simple ways.

Now, that's not talking about voices from the margin, although from another point of view one could talk about this as an especially marginalized population in the recent history of immigration in the United States, but that doesn't get you very far. Ong does explore identity formation, but in the sense of how people engage in specific kinds of relational processes, which always come equipped with a political map. You could see some of the articulations that would have to be made around labor organization, for example. You could see what would be completely crazy in terms of thinking about women's solidarity in that situation, and what might be promising. You can begin to build a concrete sense of what articulations would look like and, in that way, begin to build a map.

Harvey Can I just follow that with a parallel comment. You used the phrase “the bodies-in-the-making”, and you've worked on that much more than I have, and I think it's an extremely important concept, and I would like to get you to elaborate a little bit about it. But I would also like to raise a question which attaches to notions of the imaginary and the discussion of political possibilities, in a context where bodies are being made not in the free sense of any autonomous kind of process, but are being made in relationships with certain sets of processes which may be contradictory. I suppose the simple figure I have of that, and I go back to volume 1 of *Capital*, as is my wont, is where Marx talks about the way in which the labor process eventually converts the laborer into an appendage of capital. But it does so first in the workplace, and then as you go on through the volume, you find that it doesn't just do it in the workplace, it's doing it in society in general. So you end up with the figure, as it were, of a laborer who is an appendage of capital. And Marx gives the very term, variable capital—that's what the worker is, variable capital, variable insofar as it can be squeezed to get the surplus out.

Now the point here is to say that, if consciousness attaches to that making of that laborer's body, then how can the laborer have any other consciousness than of that condition of being an appendage? It seems to me some of the questions

that you raise, for instance in the cyborg manifesto are exactly of that sort. If we are all cyborgs, then what are the possibilities that exist from that position for a radical politics.

Now again one of the things I really appreciate about your work is that you never ever take something that comes down the pike and say it's all negative. You always look at it and say, well OK, corporate capital has done this and this and this, but here are some real possibilities which, if we really think them through, we can take account of here. So I'd like to get you to comment a little bit about bodies-in-the-making—maybe fill that out a little bit—and then talk about the possibilities of political action in relationship to these processes of bodies-in-the-making and the problem of consciousness in relationship to that process.

Haraway Right. Actually, the cyborg is a good example because some folks have picked up the figure of the cyborg—because it is after all a configurational move in a politicized narrative and not a literal statement about the world (but some folks read it that way too)—some folks pick up the figure of the cyborg and use it in a celebrational mode, and miss the argument that the cyborg issues specifically from the militarized, indeed a permanently war-state based, industrial capitalism of World War 2 and the post World War 2 Cold War. They miss that the cyborg is born as the cyborg enemy, as the man-machine for extraterrestrial exploration. Now, from that particularly unpromising position, what possible kinds of cracks in the system of domination could one imagine beyond a kind of sublimity, a kind of wallowing in the sublime of domination which, of course, many folks do ...

Harvey I'm tempted myself sometimes [laughter].

Haraway At times we feel like we don't have a lot of emotional choice. But the first and most obvious issue to me is that no world is finally ever closed, that the fantasy of the closed world is evidence of the pathological conditions called paranoia [laughter]. And the sense of the utterly closed system is not Marxist, certainly; the sense of the final enclosure of all possibility is a particular psychological symptom in the face of being overwhelmed, and not a statement about the structure of the world, in my view. Looking for the cracks is rule number one. And looking for the cracks not necessarily from the point of view of the marginality or the voice of resistance or the place that isn't yet colonized, but more of the way Leigh Star puts it in a wonderful paper that explores her own allergy to onions—a trivial problem among the world's sufferings—but Leigh uses it as an analytical wedge.

Being allergic to onions is a hard thing to convince folks about in restaurants and at conferences. But unless everyone fesses up to the onions in a given dish, their friend is going to be very sick very fast, and maybe so sick so fast that it could even possibly be life threatening. Now, she is not out to ban onions and the like; but she is interested in talking about those systems of commensurability in the world by which folks are supposed to live but which they don't and can't fit. She uses such incommensurability as the cognitive starting point for social theory. So let's take a more serious example. If you're interested, let's say, in the informatization of the world and the globalization of the world through the expansion of telecommunications, you don't look for spaces of resistance in terms of some kind of primitive, antitechnology warrior. Instead, you begin your political, intellectual enquiry from the positions of folks who have no choice but to live inside the system of commensurability which is being established, but who don't and can't quite fit. So if you're looking at circulations of money, you look from the position of the laborer who is absolutely forced to live life from inside the system of the circulation of money,

but who can't quite fit it in ways which have cognitive implications and political implications for some other possible kinds of livable world. You are always cycling through your work and your thinking from the perspective of a particular system of commensurability, whether it's money or information or DNA, the various common coins that bring people into shared worlds, like it or not. You work through, not the marginal position or some kind of point of resistance that's outside domination, but many kinds of not fitting.

That, I think, always comes from necessarily living in more worlds than one, always living in multiple worlds. There is no way that the world is totally colonized by a single system of spatiotemporalities. Everybody lives in more than one world all the time, and learns how to do so, even inside oneself as well as in any social collectivity. Out of that, it seems to me, the question of agency becomes, in principle, easy. In practice, it's a question of use it or lose it. Agency is not something that pre-exists a situation of political action, in which you sort of lift up a veil of discoveries and then go do something. Agency is, rather, the practice of actualizing the consequences of multiple lived worlds.

Chair Let me try and stretch some of these arguments out a little bit further. We've been talking a bit about bodies-in-the-making and the politics that derive from that. One of the connections that most people in this room would quickly make is with nature-in-the-making. Donna, your work has gone really in the direction from the body, from the biology of the body to nature, while David, yours has probably gone in the reverse direction. How do we begin to think about nature-in-the-making? What are the parallels and connections here?

Harvey Now I don't know whether we want to talk about nature-in-the-making; I think we should talk about just "the making", in the sense of transformative activities. Just being alive is about being transformative, and we are not the only ones who are transformative. I like very much a little piece by Michel Callon which is about the problem with scallop fishing in Saint Brienc Bay. It seems like a very conventional piece of sociological analysis talking about the various agents at work, until you come to the final agent, which is the scallops. Now at that point most people freak out; they say "scallops? agents?!" Now this struck me too at first as strange, but then I thought, "Yeah, he's right, he's dead right". I mean why do we suddenly stop agency with the fishermen and the scientists and the government, and say that the scallops have no agency in this. It does seem to me that one of the transgressive points that Donna feels very strongly about is to try to dissolve that divide between nature and culture, and I think I would want to try to do that too, although it's extremely hard to do and this is where the language comes back and gets you again and again. We don't have, as it were, the discursive strategies that allow us to talk freely about the production of nature in the broad sense that Neil originally meant it—to talk about the production process as a set of transformative activities.

I prefer to talk about socioecological projects in which it's not simply the social that's the activating unit but also, scallops and mice and all the rest of them. I haven't quite figured out what the proper language is because I find myself slipping back into the nature-culture dichotomy and the notion that there is something out there called nature—and it's out there, not just suffusing everything. So I guess my take on the question initially is to say: are there ways to dissolve a lot of those strategies which separate? That's going to put us in some pretty difficult territory, and I think Donna has been extremely brave actually in venturing into this, because as soon as you start trying to relate biology and social theory, people respond that,

well, "that's what the Nazis did", and "that's sociobiology", and so on. The tendency has therefore been to say that you cannot actually talk about the two. So we have the economists constructing versions of the world as if nature is just one big gasoline station that you can just plug into every now and again. We can't continue that mode of analysis, in place of the sorts of ecological questions that are now politically on the agenda.

So for me it's a question of trying to dissolve a preceding set of categories and finding another set of categories that allows us to talk about biological processes, the body, the making-of-the-body. The making-of-the-body is biological, social, political, all of those things, and therefore we can't say that we're simply talking about the social construction of the body in terms of the sort of clothes people wear or something like that. We have to be talking also about the biological making of the body and see the body as an evolutionary project which is unfinished and ongoing; biological processes are transformative, and we are also engaged in transformative activities. So it's terribly important to overcome these divides, again between science and social science, humanities and science, but it's terribly hard to do, and it's terribly hard to find a language for it. In my own work I sometimes give up the effort and go back to the implicit assumption that nature's over here, culture's over there, even though we really should be viewing these categories as internal relations. But nevertheless I'm falling back into the language of separation, and that's always extremely dangerous and leads to all sorts of misreadings.

So my take on it is that we should be talking about transformative activities and recognizing that they take many forms, both material and discursive. The political question then is: what direction does the transformative process take? Is it going to lead to, say, one group of bodies isolated in one part of a city—incarcerated in a prison, or incarcerated somewhere else and subjected to all sorts of degrading social and economic livelihoods? Will that then lead to a divergence in the evolutionary process of the development of bodies, the differentiation of bodies? In fact this sort of differentiation has already gone on, but we are now seeing a further differentiation along those sorts of lines.

This is the way I try to think about such processes but it feels terribly tentative and terribly awkward, and I'm not sure exactly how to go about it in ways that do not lead in 'family-reactionary' directions, which is where the right wing is very happy to take it. How do we do this without making statements that will be seized upon by the religious right? It is a political question, an intellectual question, as well as a question of active practices about what we are transforming *to*.

Haraway Maybe just something brief in reaction with that. There are concepts coming out of recent science studies called 'boundary objects' and 'trading zones'. If you're in a world where really disparate, radically disparate, kinds of socio-, cultural-, spatio-temporal formations or life worlds are in play, and are forced to be in play with each other—for example, consider the case of many sciences which require extensive interdisciplinarity, such as between engineers and software folks and physicists, who are literally forced to work with each other in order to achieve something, but who at a radical level do not share a common language or practices—there are certain kinds of entities which circulate among this community, call them boundary objects. Such objects are stabilized enough to travel recognizably among the different communities, but flexible enough to be molded by these different communities of practice in ways that are close enough to what the practitioners already understand how to do, in order for them actually to do something. And so it's a way of modelling working together in a scene of radically different languages.

Now, these may not seem to be very different kinds of communities. They happen to be in the same building at a campus in a single part of town and not really different cultures in the usual sense. But I think the sense of a common, easy language in the sciences is a mistake, which comes from ideologies about the nature of science.

So I think this idea of boundary objects is useful in thinking about the sort of contestations over—call it ‘nature’, for lack of a better world ... word [laughter]. The obvious examples are struggles over environmentalism or over genomics. Take, for example, one practice that I know fairly well, which is the contestation over making genes into property. The question of “what kind of materiality genes are going to have for different sorts of communities in the world” is absolutely on the table, it’s molten. It’s in the United Nations, it’s in the Biodiversity Convention, it’s in the International Labour Organization, it’s in the NGOs, it’s in nationalist groups, it’s in sovereignty, indigenous sovereignty groups, it’s in pure food campaign groups, it’s in revisions of patent law. Multiple constituencies are engaged these days in trying to figure out one instance of nature-in-the-making, genes-in-the-making if you will. This is a particularly commanding and inescapable problem. What makes these sorts of multiple translations happen is rarely goodwill and choice, but literally being forced into some kind of exchange relationship where genes are the boundary objects.

Genetic discourse may have, at its origin, actually been produced by one of the constituencies in the conversation, the geneticists let’s say. However, very quickly in the process genome-discourse becomes everybody’s. And it becomes a kind of boundary discourse which holds together well enough but which is quite malleable as it circulates, let’s say in sovereignty groups who are contesting through the Biodiversity Convention offices in Geneva, about whether a cell line derived from a leukaemic patient in Panama and held in a type-tissue culture collection in the United States, and then patented by the US Secretary of Commerce—whether this is going to fly or not. What kind of common or enclosed property will there be in potentially medically interesting and agriculturally interesting genomes that are collected in familiar colonializing processes, collected and brought back to centers of calculation and then sold back under unfavorable terms—very familiar imperializing processes—but which are mutated in important ways, with different kinds of actors on the scene?

In the example which Helen Watson-Verran from Australia writes about, there are two different groups of people: Australian-English sheep pastoralists on the one hand, and a certain group of aboriginal Australians on the other. Because of a land ruling by the Australian Supreme Court in 1980, these parties are actually forced to talk to each other in order to develop a common system of land possession. Neither side gets custody of the land; it’s a joint custody dispute. They are forced to develop power-charged ways of dealing with each other within a particular context that changes the rules of the game from the history of Australian-English imperialism in that region of Australia, because of successful indigenous sovereignty victories in the Australian courts. One group of people in the conversation understand that they are working with a heavily metaphorized set of concepts, in this case aboriginals, because they are used to different lineages of people literally possessing metaphors that in turn give some kinds of access to land rather than others. Whereas the English pastoralists don’t know they work with metaphors when they talk about contract. The self-invisibility of the metaphoricity of contract is so deep, that the hard problem for the sheep herders is figuring out that they are working with metaphors at all. The hard problem for the aboriginals is to figure out that you don’t necessarily own metaphor once and for all, that metaphors can be transferred

in destabilising ways that shape certain kinds of assumptions about land on their part. Both groups are going to have to give on this, in the particular context of the court decisions that have been made about land.

I think that's paradigmatic, not of this question of nature-in-the-making as an abstraction but, in asking the question: in which kinds of situation in the world are which kinds of people being forced to find language they didn't have before the encounter? So what's the implication of that for learning how to make connections for more livable worlds, which after all is a fundamentally moral and political commitment? It's that kind of imagination of livable worlds which precedes the knowledge-making practice, although it's constantly responsive to it.

Chair I think that example brings up very well the question of the distinguishability and indistinguishability of metaphor and materiality in spatial terms. But rather than really follow that up now, I think it's probably better to open things up and ask for contributions from the audience. There really is a lot that hasn't been covered, not just about materiality and metaphoricity, but about space and many other issues? So let me open it up and ask for comments and questions for David Harvey and Donna Haraway.

Audrey Kobayashi I would just like to compare what Donna was saying about agency and David was saying about the transformative nature of being, and to put these together ... I don't have any problem with the language the transformative nature of being, but I think there are two problems. One is the potential erasure of nature and the difficulty in getting around the nature-culture dichotomy. The other is the question of agency and how it actually fits in the transformative nature of being. It seems to me that if we have a moral commitment to social change it will be vital to get beyond these dichotomies, or through them. Could you comment?

Harvey Here's the way I broadly think about the agency question, which is often cropping up. At a very simple level I think agency resides everywhere. With everyone, all bodies, through scallops and the like. But that, in some ways, is not terribly helpful when you are thinking about a particular political project. So what it seems to me has to be done if all of those latent agencies are to be mobilized into a political-ecological project is that, first off, connections have to be made between, say (again I am using simple categories), the imaginary and the realm of discourse, between the realm of discourse and power, between power and institutions, institutions and practices and social relations. In other words, some ways of connecting across different moments of a social process have to be found. But secondly, there has to be the coming together of some sort of political agreement as to what the objectives are upon which all those agencies are going to be focused. Now we live in a kind of society where some people are specialists in the discursive realm—I suppose that would be us—some people are specialists in the institutional realm, and so on. So part of the conversation has to be between groups who are situated differently within different aspects of the social process. And then there has to be the capacity to find ways not only to link those together but to talk about what it is that we are trying to achieve, and to come together to define what an alternative possible world might be and how we might go about trying to establish it. So 'agency' is not simply a question of looking around for where agency is—I say it's everywhere. It's really about how that intense capacity for agency everywhere amongst everything and everybody, how does it get mobilized into political projects and what is the political process? What is the process of conversation, if you like, between different people in different situations across different discursive realms?

How are they to come together and say, "Well, this is the process that we are trying to get into".

I like the original plea that Donna started out with, saying that in some ways we have surrendered to the notion of what the hegemonic political project is. It's been surrendered to a bunch of crooks in Congress, and what we have to do is to try and find some way to reestablish that project. To do that we have to go through, it seems to me, this rather difficult and painful process of rebuilding, not in terms of some blueprint from on high, but at a very grass-roots level: how do I, somebody who is working in this discursive realm, work with a particular political organization in Baltimore around certain things? And what kind of project will we have? And if they don't think about ecological questions, then what am I going to do when I go and talk to somebody who is really into ecological politics? You know, how do you start to have these conversations?

So for me the question of agency is always agency in relationship to a political project. And different political projects define different configurations of agency. For instance, people may not like class politics, but I'm afraid I can't think of any other way to defeat and destroy capitalism than by class politics. If you can tell me some other way to do it, then great—do it. Now I'm not talking about the old vision of the working class massing on the barricades, but I am saying it has to be class politics because capitalism is a class system, and if that is what your political objective is, then there is only one way to go for it and that's through "workers of the world unite"—workers understood in the broadest sense. That's what you have to do.

If your political project is not that, if it's something completely different, like making capitalism ecologically responsive, then a completely different mobilization process goes on. And I think that here the kind of imaginary of what the alternative possible world is about becomes utterly crucial to defining what agency is, and how that immense capacity for agency, which exists everywhere and amongst everyone and everything, can be mobilized.

Haraway I think that the most difficult problem that I face, if I own up to it, is I have almost lost the imagination of what a world that isn't capitalist could look like. And that scares me. I really don't, in any kind of thick way, know how to imagine, at the scale that such imaginations would have to work, both little and big. And I think this is a shared deep, deep problem and that it's part of the loss, the systematic loss, of rhetorical battles going on these days across the world. It's not just in the United States. We are losing effective social imaginaries, and it matters in concrete, specific issues: for example, how to defeat the antiaffirmative action initiative in California this Fall? Why did we lose Proposition 187 as badly as we did? And why in the world is it as bad as it is? Part of it is that, if I'm honest with myself, I really don't know how to imagine any more the *scale*, small and large, of alternatives. Capitalism seems so ubiquitous that I don't know how to imagine another. That's maybe just a psychological fact for me at this moment. But I fear many of us share the trouble.

Derek Gregory You've both talked about the languages we *don't* have. While I want to retain the analytical languages that you both deploy to such effect, there are also very considerable resources in the other languages that we *do* have. These are poetic languages, which are extremely important in the political mobilisation of the sorts of projects you've both been talking about. I say this because I've always been struck by the parallels between Donna's 'cyborg manifesto' and the *Communist Manifesto* ...

Haraway Absolutely!

Gregory In the *Communist Manifesto* you have an extraordinary deep sedimentation of analytical work, but it's captured in some of the most beautiful, poetic language. I think precisely that combination is retained in the 'cyborg manifesto' and in David's own manifesto too⁽²⁾, so I don't think we need to be casting around in the abstract for other languages without first remembering the resources in the languages we do possess.

Haraway And I think we ought to be doing a lot more propaganda work, in all sorts of forms, and I think that looking at our academic work as a kind of performance art is not a bad idea. It's hormonally dictated! ... I'm a determinist!

Ken Hillis After the cyborg, is there any way to theorize the agency of technology that gets around accusations of technodeterminist? I would want to insist on an agency for technology without being a technodeterminist.

Haraway I know what you mean. Well, two quick things. One is, I think that for me when I feel that way, it comes out of a residual kind of Manicheism vis-à-vis technology. I'm producing technology, as the other, which is the enemy, which is not me, which I must somehow not be. And I think that's deeply inherited, and ... deep trouble. And then the second issue comes right out of Marx: every technology is a frozen moment of social practice and may be not so frozen. And in that social practice all the actors aren't us, even in the broadest sense, plus the scallops. Machines are arrangements of practice, and that certainly includes the personal body. Thinking of machines as an 'it', over and against which our organic and internal cells have to conduct some kind of heroic struggle, is a very hard framework to avoid. There are so many ways that we inherit that view, that it's not even funny, and I don't think anybody is free of the problem. But I think in the Marxist tradition in particular, there are good ways of learning how not to do that, and they have to do with looking at all things as barely stabilized historical processes—literally, unravelling entire worlds. You can think of the history of plastics and the German dye industry, and inks, and then the whole history of literacy. And pretty much by the time you're through, this stuff is as intimate and as interactive as anything else. That's the main way that I think one does it.

And then the second and absolutely critical point is to get at modes of description and practice that don't assume all the world is human either, OK. So if we talk about historical practice, or just practice without any adjectives, we are talking about lots of kinds of action that would be badly described anthropomorphically—remember those scallops? Learning actually to do that in a culture that had tended to work out of nature-culture dichotomies is hard. What sorts of descriptive practice do we use where the agency of the world is heterogeneously complex. Even the word 'agency' is mainly trouble for doing that, and I get accused of any number of forms of animism. So I talk to my witch friends for a little comfort [laughter]. I talk about the world as coyote, or as trickster, in an effort to signal that when we talk about every kind of object as a congeries of practices, we don't mean all the actors are like us. And we're not good at that.

Susan Ruddick I want to focus especially on the question of agency and the issue of aboriginal and Australian-European farmers that you raised. This was a forced

⁽²⁾ "On the history and present condition of geography: an historical materialist manifesto" *Professional Geographer* 1984 36 1-11.

agency; they were forced to share power. How do we create the conditions for this kind of power sharing?

Haraway Well I think that example actually is a good one—*through struggle*. The aboriginals achieved a change in the rules of the game through protracted court (and other kinds of) struggles, in alliance with other aboriginal groups in the region, and also internationally. The sovereignty movements which have developed worldwide over the last twenty-five years made a difference. Also the particular change in the history of Australian national capital, the changed histories of immigration in Australia—many sorts of issues came together—but the ability to engage in that conversation was the result of protracted struggle over whose language was going to translate whose land. And I don't think there is any way outside of the specificities of those processes.

Harvey Can I just add a brief point to that. One of the operative rules I have is that no ruling class has ever willingly given up its power to rule. Therefore, while situations of this kind arrive in which some sort of force from out there says: "Well, OK, you folks there, put your heads together and power-share on this", ultimately I think we have to think about how to mobilize and to confront ruling class power. Now at various times ruling class power weakens itself, and actually, if you look at the history of revolutions, many revolutions have occurred at moments when, in recent history, the bourgeoisie has shown itself to be totally unfit to govern—it doesn't even know how to govern, and generally it's so messed up that even *they* want to take a walk and forget about it [laughter]. So those situations do arise.

But there are also questions of mobilization and of mobilizing power, and I think in that very broad sense that (forgive the Marxist gendered metaphor) force is the midwife of history; the mobilization of force (not necessarily violence) but of collective political force is absolutely critical. And I think maybe one of the things we've forgotten in academia is the whole question of how to mobilize force and how to mobilize it in a coherent way so we can challenge ruling class power. That's the only way in which you are going to end up with any kind of power sharing. I think there is no option except to have a political project that mobilizes agency in that kind of way.

Davie Lighthall Given that, couldn't we have a broader conception of class? For instance, the power over OncoMouse is very much a part of—a continual extension of—class relations.

Haraway Yes, and the nice thing about a figure like OncoMouse, and the America that s/he inhabits, is that it is also so full of contradictions. There are redistributions of agencies and powers all around OncoMouse, and they aren't all hostile. It's critical to understand that and grasp the possibilities of these kinds of reformulations as well as name the new, more extended dominations. We all come into the world having inherited many histories, having inherited antiracist struggles of many kinds, having inherited women's movements, having inherited Marxism and many other things, OK. The sense that David uses to talk about class—that work is defined in terms of capital and that for us there will be no serious transformations unless we learn to organize force in our own interest and that's class struggle—I agree with that. But at the same time I have a kind of tooth-screaming ache that says it really is not alright in the world with women, it really is not alright in the world with the racializations or the ethnicization, the kinds of inequalities which are mobilized by capital but not explained by it. The simultaneity and the size of it, the scale of it, are daunting. If we have learned anything out of the last years of

splitting among ourselves, it's the necessity to learn to speak to the simultaneity of the trouble, in poesis as well as in analysis. And that means we have to have a much broader metaphoric palate for talking about modes of change, modes of relationalities, describing scale. We still really don't know how to do that. And until we do know how to do that, we are still not going to achieve the kind of control of public discourse that we need.

Dick Peet I was struck with what you said a few minutes ago about your inability to imagine a different future ...

Haraway It's depressing ...

Dick Peet Yes. I think we might talk a bit about imagination and control over the social imaginary. We in this room work in the imagination industry, and it is our job as radicals to get people to be able to imagine their own imaginations. I think we need to talk about that. I'd like you to talk about that. How do we do that? How do we get people to imagine their own imaginations, especially when we have difficulty doing it ourselves?

Harvey There's this famous comment by somebody who I'll leave nameless—it's a question of "who will educate the educators". And I have to say that it's a rather sad commentary on the nature of the world, but most innovative ideas politically—imaginary ideas—come from outside of academia and have always come from outside of academia. So it seems to me one of the things we have to do in our own situatedness, and we do have limited choices as to where we situate ourselves, is to try to situate ourselves where imaginaries are being produced, not in some sort of formalistic way. It's interesting how much in academia we end up talking about something which we've lost, which we don't have, so there's an immense industry now writing about the imaginary when nobody has any imagination over what the alternatives are. And I think sometimes there is a lot of that about ethnicity and the pursuit of ethnic identity. A lot of ethnicity has been genuinely lost, and so now we've got this invention of ethnicity.

One of the answers to that is that we have to find some way of relating to events and activities that are going on outside of academia and learning to internalize them within our own imaginaries, and within the imaginaries of our students. This notion that people can go to university and learn the imaginary which is going to construct the alternative society seems to me fundamentally wrong. And if it did come to pass, god help us!

So for me I think it's vital that we find some mode of relating. Just to give an example, how much of the whole recent history of the ecological movement was really based inside a university? Global environmental management, yes; but in terms of radical ecological thinking ... inside the university? Hell, no! It came from outside. So one of the things we have got to think about is how to internalize that, and how then to actually recognize an imaginary when we see it, to work with it. And I must say in my own life I've always had this problem with being an educator, because I'm always terribly concerned about who can educate *me*!

Margaret FitzSimmons Well just to carry on from what David is saying, namely that we need to connect outside the universities, I want to remind you of Raymond Williams' admonition that we look for the Janus-faced moment, the moment when opposition is emergent. While I agree that we need to cultivate our own imaginations, there also is the aspect of critique in which we all engage each other, and the need to create radical alternatives.

Haraway Yes, I think this stunning liveliness of the world, which finally doesn't have much of an explanation, is what turns that inability to imagine something else into a momentary sense of deep trouble, and not a permanent condition. And often enough, in one of life's great sadnesses, I think many, many people have turned to deeply conservative institutions to reliven themselves, to return to a sense of liveliness, including the institution of compulsory heterosexual, reproduction—institutionalized marriage. There was a period, and one remembers the moment, when there was the actual, serious imagination of the liveliness of adult friendship as a life-sustaining permanent structure. I have serious agendas about learning how to name and live this livelinesses—both in more or less traditional institutions, but also in ones that have been dropped a bit by folks like many of us in this room—and in kinds of ongoing life-giving practices like friendship, like solidarity, like loyalty, as political work.

Gerry Kearns I'd just like to express a worry about the intent to develop the imaginary for purely linguistic means, as if one could thereby find the appropriate metaphors to talk about things that really matter. I'd like to suggest that there might be a way of connecting history with alternative politics and that one can actually develop metaphors by telling stories with those metaphors. The aboriginal example mentioned earlier is an example of telling a story which illustrates the power of the metaphor and the purchase of that metaphor in the classic tradition of, for example, Richard White's use of the metaphor as the middle ground. The range of matters covered by the term 'the middle ground' shows that Anglo-Americans actually do negotiate with native Americans and have done historically, and have made all sorts of contracts with them under conditions of relative powerlessness on their part, and it is only when they had overwhelming powers that they wrote them out in some sort of racist narrative. So there is some interaction between metaphorical resources and historical accounts that are grounded in all sorts of alternative politics.

Haraway And common organic connections.

Kearns Yeah, absolutely agree.

Andrew Light I'd like to return to David Harvey's comment that agency should be thought through in some relation to a transformative political project. Can you perhaps help me to imagine a possible world consistent with a robust political ecology without making use of the nature-culture distinction? Without the distinction, how could we think through restoration ecology, for example, a very important project that takes us right back to the nexus of the nature-culture issue, and which is emerging in the US and also in Canada. Ecological restoration is posited as a nice kind of thing to do—lots of people in Chicago go out and burn the prairies and replant them with native species. But this also turns out to be a very effective way for corporations to sell an environmentally friendly image. Or there are wetland mitigation projects which are very popular in Florida right now. The federal government has sunk millions of dollars to balance the state of wetlands in Florida, and these projects are mostly pretty bad. Now I can critique these corporate and federal projects from the point of view of process and in terms of product. In terms of process, I could probably stick just to your notion of transformative activities and talk about the ways that transformation occurs; but in terms of the product, the two criticisms available to us depend on the nature-culture distinction. The first would be the harm done to nature as some sort of agent, and the second would be the harm done to the culture of nature in communities that are having their local nature corporatized. So, should we really abandon this distinction so quickly?

Haraway A student at UCSC has been studying contemporary restoration ecology projects, writing forcefully about comparisons between some of the Nazi-period commitments to getting rid of xenophytes, extricating foreign plants and reestablishing the native ones. From his work, the only addendum to what you said that I want to throw in is that my own suspicious hackles are raised by restoration ecology's potentials for deepening nativism and xenophobia in what is still a white supremacist country. And I think it's working that way ideologically, and so the product bothers me as much as the process. How do we start thinking about mixed communities, where we are as interested in the organisms in those mixed communities, and not revert to some kind of notion of nature as *either* process or product, but where instead there's some kind of accountability, a kind of permanent historicity at all levels of the onion?

Chair I think we could take two more quick questions.

Vera Chouinard Well, I don't really know where this discussion is going, but I have a bit of a feeling of angst that it's becoming diffuse. It's not as simple as just targeting capital, and I'd like David and Donna to comment on how researchers can address multiple identities and how we can link this to global coalition building. How do we deal with different identities and build practical coalitions?

Haraway Well, I would just reiterate what David said earlier concerning practical political projects. I think that these questions cannot be addressed in the abstract, but can only be addressed from specific points of view. For example, say, we've been working on this particular issue of the location of toxic dumps, or of nuclear waste, or of redesign of work places. These issues all involve specific, practical articulations of issues in heterogeneous ways. I think that I'm committed to the notion that those kinds of questions cannot be addressed in the abstract and have to be addressed historically and practically, and then they make sense. Then you see whom you are with and how that might build.

Harvey If I could just ...

Chouinard I'm just really concerned about the picture of power that emerges from this vision. It's very difficult to conceptualize how we go about doing this with specific research projects. I think if we only talk about this problem in the context of specific research projects, we run the danger of becoming fragmented ...

Haraway I guess I don't think we're so much fragmented as quiescent.

Chouinard I'm sorry?

Haraway Quiescence worries me more than fragmentation right now.

Chouinard Both worry me.

Harvey If I could just make a quick comment. I think a phrase that Raymond Williams used, which I have picked up on a bit recently, is "militant particularism". In a sense I think you could argue that almost all political action at its root is militant particularist. It's about a particular issue, it's about mobilization about a particular issue—like the toxic-waste dump, or low-wage employment in the city or something—and then the question arises as to how that militant particularism gets translated into something that's much more universal, global, or whatever, and how different militant particularisms relate to each other and how they can be *made* to relate to each other. It seems to me that the politics of research projects is, first off, to define an issue which is, as it were, militant and particularist in which you could

engage in a very deep way; but then at some point also to be asking all the questions: how does this relate to these other projects? And actually I suppose I disagree a little bit with Donna ...

Chair Finally! [laughter].

Harvey ... on the thing about quiescence. I think actually if I look in Baltimore there are a 101 different organizations at work. I mean there's the coalition against lead paint poisoning of children, and then there's the coalition of tenants' organizations, and so on, and each one of them is doing its own thing in quite a radical kind of way. So, you know, there's plenty of militant particularism around, plenty of research projects to engage in: so, you know, do I work with the lead paint poisoning group, or do I work with the people who are fighting low-wage employment in the city, trying to get a decent minimum wage and a wage compact for the city—who do you work with? But then it seems to me working with any one particular group or set of groups, then the issue is how do we then start to establish the relationship with and between them. Because right now there is a lot of this sort of detailed stuff going on and the problem seems, to me anyway, to be largely a question of how to pull it all together. Not in the sense of some outside agitator coming in and trying to say: "Ah, you folks should all be part of my movement". (That was the problem of Jesse Jackson and the Rainbow Coalition, it seems to me, as much as I wanted that group to work.) But instead if there can be some way of building bridges, then that is what the important work of politics is about.

Haraway I agree with that too. I think it's absolutely essential. It's just that I also see a lot of folks at this point needing to get back engaged. Particularly in the academy.

Chair Yes, the last question.

Daniel Sui I have a general question. There's a new book published titled *Higher Superstitions* and in this book both of your works have been widely cited by the authors, one of whom is a biologist and the other a physicist. Unfortunately, these authors accuse you both of being "the natural enemies of the natural sciences" [laughter, applause].

Harvey That's not bad; I'm glad I'm natural, anyway. I thought for a moment I was socially constructed! [laughter].

Sui So my question to both of you is: in Neil Smith's words, it seems to me there is a real theory war and a cultural war in American academia right now. Could you please make some comment on this book, and more generally on the response of the scientific community to your work?

Haraway Well, Neil!

Harvey I'm sorry to say that I haven't actually read it. This comes back to the way borders get policed in academia and I think it's something that goes on with scientists. If you tread on their terrain, they get terribly, terribly upset. For the most part they don't have to get upset because we haven't got much power in relationship to them, so they don't really bother very much, and I don't think, for instance, most scientists, will read that book and take it very seriously—they don't have to.⁽³⁾ They decide the

⁽³⁾ Postscript: "I was wrong about this: even the newly appointed chair of my own Department, a person with an engineering background, recently confronted me with the book"—David Harvey.

university structures, they have the power, they have the clout, and what they say happens. And they aren't worried by a few humanities scholars jumping up and down about this and that [laughter]. Listen! I live in a department, the Department of Geography and Environmental Engineering at Johns Hopkins, which has two human geographers, and all the rest are engineers and scientists. And they kind of look at you and say: "You don't have any money, you don't have any research grants, who are you?" [laughter]. I mean they are nice enough about it; they sort of tolerate us, but what we do doesn't matter that much to them. I think there are some other issues, though, and I think actually Donna's in a much better position to talk about them. You've already partially responded to this, and you've been involved with them, and they tried to keep you from speaking on campus and all sorts of stuff like that. I mean, talk about repression! They really get into repressive, extraordinarily repressive, maneuvers around this and you probably handle it better than I do.

Haraway I don't handle it well at all, but I'm more worried about it, I think, than you are, David. I think the reason that book comes out when it does is that there's this broad community of folks—call them science studies people—who have actually achieved something and it's been noticed. We've only achieved a little, and that little is being stomped on with some ferocity. The name-calling that's going on in that book under the rhetoric of recuperating objectivity and real knowledge, over and against "the barbarians at the gate", is like other aspects of the cultural wars. It's like the political correctness attack, and it's being noticed. I think that *Higher Superstitions* is being read. The New York Academy of Sciences is having a very political conference this spring, which even brings in some left folks who are upset about postmodernism on their side. I think it's dangerous, not necessarily just that book, but I think the book is part of the deep cultural reaction at precisely a moment of uncertainty for institutions of natural science in this country.

Maybe this sense of crisis is especially true of biology. From the point of view of many biologists, certain structures that guaranteed a social and psychological consensus around objectivity have been undone, and are being redone rapidly, in such a way that taking for granted certain kinds of disinterested engagement in knowledge production can really no longer be sustained by biologists. Many biologists are corporate consultants if not owners, and the everyday practices of work have very much more to do directly with competitiveness. The whole legal and research structure has changed from the kind of contract developed around World War 2 and the post World War 2 era, out of OSRD, and NSF, and NIH funding, and other sources. All of that is changing. There are really major reorganizations in the ways of doing science in the many biologies, and many biologists are now directly related to the generation of value and the circulation of capital. Redoing the ideologies of objectivity is part of the work. And I think what we are seeing being produced are very persuasive (to scientists) ways of becoming confident again about the ongoing productions of disinterested knowledge, right at the heart of Monsanto and Calgene, and all the rest of it. The science studies folks, Afro-centrists, feminists, environmentalists, leftists, creation scientists, all of us are considered the same because we all have disavowed various versions of realism, in favour of perspectivism and social construction. And I think the authors of *Higher Superstitions* are being heard. They are having a lot of influence in the National Academy of Sciences and various other bodies. They frequently misrepresent a constructionist approach and work hard to shore up problematic views on objectivity.

Sui So is there a chance that these two views could be reconciled?

Haraway Which two views could be reconciled?

Sui The scientific view and what these authors call the academic left.

Haraway I think that what they call the academic left—we have a lot of work to do in building alliances with sciences, that we aren't doing very well.

Harvey I wouldn't regard myself as hostile to science.

Haraway Nor would I, but they would.

Harvey Yes, they would. And I think that this is in some ways precisely the point. In fact I am very pro—extremely pro—science in lots of ways and I think the question for me is: “How and what is appropriate science, proper science”—this is the question.

Haraway They hate that question.

Harvey I've been reading Alfred North Whitehead and he has this wonderful statement. There is a profound irrationality in science, he says, because science thinks it can carve up the world into isolated blocks and can understand the world through these little blocks. And then as soon as you actually dismantle those borders, none of which exist out there—Whitehead was looking for a philosophy of organisms—what you find is that *all* science is organized as a profoundly irrational project. Now if you try reading that to any of your scientific colleagues they go berserk, because they regard themselves as guardians of rationality and objectivity and all those kinds of things, and so it's all right for you emotional people to be over in social sciences, but we are doing science.

But I think one of the things we have to do, and this is where some of the inroads are beginning to tell, is by looking at some of the profoundly irrational ways in which science works and the profoundly irrational forms of its organization. You can actually reclaim the notion of rationality in a way that is profoundly oppositional to some of the practices that are going on throughout much of science, without necessarily saying it's all a load of rubbish, or becoming a sort of mystic and sitting under a banyan tree.

This is where I think that a lot of the critique of rationality that some of the humanists have engaged in is sadly misplaced. In fact we should be reclaiming the notion of rational argument, reclaiming the notion of serious rational discussion, and doing it in a way that is profoundly challenging to some of those forms of organization. That seems to me to be the political path within the infighting that's going on at this level within academia, and that's the path that I would want to take—rather than conceding their claim about irrationality, to use their language and turning it against them, saying “Ah, you say you are rational, explain *this* to me. How can you rationalize that, in your own terms?”

And actually there are a lot of scientists who are willing to listen; scientists are not an entirely homogeneous bunch of unthinking Monsanto clones. There are a lot of people who are willing to listen, but I think what Donna mentioned earlier is right: we haven't really been in the proper conversations. And that's one of the conversations that should go on, and the academy is a good place to have that conversation.