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“Biotechnology” and “Women’s Bodies”: Hazardous Concepts?

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Good morning, and welcome. I am very delighted to be here. I am honored to have been invited to take part in this very important gathering, and deeply grateful for the opportunity to meet and to learn from all of you. I have already learned so much, and I am very impressed with the work that Korean WomenLink has been doing here. I’m sure that all of the participants join me in sincere appreciation of Korean WomenLink, and the other sponsoring organizations, for making this event possible.

One of the things that makes this forum so remarkable, is that it has brought us together from so many different parts of the world and so many different angles of engagement with biotechnology and women’s bodies. To be sure, there are some things we have in common. We each bring with us the knowledge that comes from lived experience – not necessarily experience with stem-cells or cloning in particular, but certainly of various other biotechnologies: pharmaceuticals, contraceptives, immunizations, et cetera. This lived experience is, for each of us, shaped by our own particular location within the structures of power and privilege that distribute the benefits and the burdens of biotechnology so unevenly around the world. And I trust that all of us have come here because we are concerned, as human beings and as feminists and as

people committed to social justice, about the implications of stem-cells and cloning, for women's health and women's rights.

Beyond these very important commonalities, part of what makes this forum such an exciting opportunity for dialogue, is precisely that we do not all share the same backgrounds and perspectives, and we do not all already know each other. Given this, let me introduce myself by saying that I work as a scholar and a teacher of medical anthropology at the University of Washington, which is a large public university in Seattle, in the United States. I realize that "medical anthropology" may itself be an unfamiliar term, or may have very different meanings here, so let me further explain that this means I use the concepts and the methods of social anthropology to study health, illness, healing, and medicine, including biotechnology. Thus, in my own research, I have used observation, interviews, archival research and textual analysis to explore how one particular medical technology, fetal ultrasound, has been incorporated into social life in the U.S. – within medical practice, but also far beyond the clinical setting, in everyday life, consumer culture, mass media, and abortion politics.

Medical anthropology proceeds from a commitment to the view that health, illness, healing, and medicine – including medical technologies, even the cutting-edge biotechnologies of stem-cell research and cloning – are part of social life. This very simple insight, that biotechnologies are part of social life, can if we take it seriously really help us think more clearly and act more effectively around issues such as stem cells and cloning. Because biotechnologies are part of social life, then we can use the methods and conceptual tools of critical and feminist social research, including anthropology, to

understand them. And because biotechnologies are part of social life, we can address them as part of our collective efforts to achieve social change.

As my contribution to this forum, I have been asked to “provide some theoretical perspectives on biotechnology and reproductive/human rights.” Rather than set forth any kind of grand overarching conceptual framework that everyone ought to adopt, however, I shall attempt something a bit more modest, and simply offer some reflections and cautions concerning the theoretical ideas that, as I shall argue, are already implicit within the key terms “biotechnology” and “women’s bodies,” around which our discussion here has coalesced.

The primary focus of this forum is, of course, the very real dangers to women’s health and women’s rights that are posed by stem-cell and cloning technologies, their commodification, and their globalization. My remarks here, however, shall not concern the physical dangers inherent in these devices and procedures (about which others will surely have more to say), so much as the rather different dangers inherent in certain ways of thinking about them. As I shall suggest, the terms “biotechnology” and “women’s bodies” contain implicit theories that are problematic, because they make it difficult to address biotechnologies as part of social life. We must try to make explicit the assumptions hidden within these terms that we are using, drag them into view so that we can reflect on them, discuss them, and work through them together, as consciously and as thoughtfully as we can. Otherwise, we risk allowing them to limit the questions we ask, the analyses we produce, and the forms of action we undertake.

HAZARDS OF “BIOTECHNOLOGY”

I’ve given my comments the title “‘Biotechnology’ and ‘Women’s Bodies’: Hazardous Concepts?’ In choosing this title I am taking my cue from a 1997 essay by the historian Leo Marx, titled “Technology: The Emergence of A Hazardous Concept.” In this essay, Marx asks when and how the word “technology” emerged in its modern meanings.

While “technology” sounds very tangible and concrete, Marx shows that this concreteness is rather illusory, and soon dissolves into a series of cultural and historical puzzles. Machines of various kinds have been around for a very long time, but the term “technology” is relatively young, and emerged historically in tandem with new kinds of machines embedded within complex systems. Any specific machine or device to which we might point as an example of a “technology” can function only within the context of a large and complicated network that is as much social and economic as it is mechanical and material. Think, for example, of a computer. For the device sitting on your desk to actually work requires an elaborate network of people, institutions and things: the knowledge of programmers and users, the labor of the workers who assemble and ship and stock and repair them, the legal and business infrastructure that mobilizes capital investment in computing, the infrastructure of electric grids and communications networks, and many other elements. A computer is, then, part of a complex system that includes social, economic, and legal as well as material components – and without them, it would be little more than a big ugly paperweight.

So where exactly is the “technology” in all of this? As Leo Marx asks: “Where do we draw the boundary separating the solidly material, technical element of technology

from the rest of society and culture?”(981) His answer, of course, is that really there is no such boundary and indeed cannot be, because as we have said already, and as the example of the computer suggests, technology is part of social life.

The problem with the term “technology,” however, and its variants such as “biotechnology,” is that it strongly encourages us to impute the concreteness of the mechanical device, to the entire complex of social arrangements within which that device is embedded. As Leo Marx explains:

[technology] seems “thinglike” when we point to specific objects or techniques as its most visible manifestations, but the discursive power of technology as a term is in large measure attributable to its vague, intangible, indeterminate character – the fact that it does not refer to anything as specific or tangible as a tool or a machine... A significant result of [the] history [of the concept of technology], with its unstable marriage of artifacts and socioeconomic structures, is that the concept of technology is particularly susceptible to reification. To borrow George Lukacs’s lucid definition, reification occurs when “a relation between people take on the character of a thing and thus acquires a ‘phantom objectivity’...” A distinctive result of reification observed by Karl Marx... is the power exerted by commodities over human beings; in that case social relations between people were mysteriously endowed with an objective, even autonomous character. I believe that something similar has happened with technology, which has also taken on an objective character, as if it existed independent of its human creators, and is capable of controlling them... (982)

The central problem with the concept of “technology,” in other words, is that it encourages us to regard this whole complex system of social relations as being equally fixed and thinglike as the material device in question, and progressively changing along a trajectory quite independent of society. We implicitly adopt just such a framing whenever we ask what the “impact” of some new technology will be on society, or how society should “respond” to it:

To speak, as people often do, of the “impact” of a major technology like the automobile upon society makes little more sense, by now, than to speak of the impact of the bone structure on the human body. (981)

In other words, it doesn’t really make sense to talk about the “impact” of technology on society, because they simply aren’t separable in the first place. The concept of biotechnology may be hazardous, then, to cogent thought and effective political action, if it hinders our ability to engage with biotechnologies as part of social life.

HAZARDS OF “WOMEN’S BODIES”

If the concept of “biotechnology” may be said to be hazardous in these ways, so too is our other key term, “women’s bodies.” As with “technology,” so too the concept of “the body” comes already equipped with implicit theories that encourage unhelpful habits of thought. The concept of “the body” strongly encourages us to treat bodies as existing outside of social life, in nature. That is to say, the concept of “the body – the singular, universal, unchanging, biological body depicted in anatomy atlases – is an abstraction that both shapes and constrains how we think about bodies (in the plural) as they are lived. Just as with the concept of technology, so too with the concept of the body, our challenge

is to resist the tendency toward reification, and instead insist upon framing bodies as part of social life.

Okay, so: we must regard bodies as part of social life. Fine. But what exactly does this mean? Few of us, probably, would find particularly surprising or objectionable the claim that bodies are shaped or conditioned by social life, such that for example some bodies are well-nourished while others are stunted by hunger, some bodies are marked by hard labor while others are disciplined by exercise, and so forth. This is an important and valuable insight, as far as it goes. But when we say that bodies are shaped by social life, we leave intact the idea of “the body” as something outside of society, upon which social life has an “impact.”

A The feminist theorist Judith Butler has suggested, famously, that “matter” may be understood as “not a site or surface, but a process of materialization that stabilizes over time to produce the effect of boundary, fixity, and surface we call matter” (Butler 1993:9). The important insight contained within this rather abstract pronouncement is that bodies may be understood not only as something that individuals have but as something that people collectively do – and do in multiple different ways.

Bodies are, in other words, not just shaped and transformed but actually take shape and take place through social practices of all sorts: feeding, legislating, training, cutting, explaining, beating, loving, diagnosing, buying, selling, dressing, and healing, among others. Once we conceptualize the body thus as materializing in and through social practices, new perspectives open up. It becomes possible to recognize bodies as having contours and boundaries that are not simply given by nature, but accomplished through histories of collective human activity and struggle. It becomes possible to ask,

instead of simply presuming, what a body is in a given instance, where its significant surfaces are, how those surfaces came to be fixed. So for example, we may want to ask: does the public sphere extend into the bodies of some people and not others? Does the market extend into the bodies of some people and not others? To have an individual body whose surfaces are inviolable is not something we can take for granted as being given in nature. Rather, in this world at this moment in history, to have such a body is a privilege that many people do not enjoy. And achieving such a body for all people may be a worthy goal to work toward.

Indeed, when we recognize women's bodies as really fully social in this sense, it becomes even more clear, just how much is at stake in our efforts to organize as feminists around biotechnologies. The question is what sort of world and what sort of bodies we will collectively create.

CRAFTING CONTEXTS

I have suggested that the concepts of "biotechnology" and "women's bodies" contain implicit theories that may, unless we reflect on them thoughtfully and creatively, limit the power of our analysis and the scope of our efforts. In both cases, the hazard concerns a tendency to locate "biotechnology" and "women's bodies" outside of social life, and to regard them as more fixed and thinglike than they really are.

Another name for this hazard, of course, is "fetishism." Fetishism means mistakenly attributing to some object powers that in reality reside elsewhere. The fetishism of commodities, according to Karl Marx, is the social magic of capitalism, through which "value" is attributed to objects as if it were a power mysteriously inhering

in them. This is possible only when the object's connection to the true source of its value, i.e. the human labor through which it was produced, has been obscured. The challenge, then, is to "decipher the hieroglyphic, to get behind the secret of our own social products" (Marx 1978:322).

To meet this challenge, to combat the fetishism of biotechnology and women's bodies and reclaim them as fully social, requires working to create new contexts. This involves two related forms of work. On the one hand, it calls for an intellectual work of documenting and identifying unrecognized connections, and revealing how social life actually animates biotechnologies and bodies. On the other hand, it also involves a political work of mobilizing people to transform the social worlds within which these fetishized technologies have been granted such unwarranted powers.

In the time that remains to me, I would like to offer what I hope will be some helpful suggestions for avoiding the conceptual hazards of which we have spoken, as well as some examples of how others have worked to craft new contexts. So, what follows will not take the form of an argument, so much as a list – or, better, a series of possible jumping-off points for further discussion.

Suggestion #1: Don't Leave Biotechnology to "The Experts"

One of the main conceptual hazards implicit within the concept of technology is the idea that biotechnology lies somehow outside of social life. When we accept that idea, we tend also to accept the notion that only a tiny group of experts who specialize in studying it can have anything useful or important to say about it. So the first and perhaps the most important suggestion I would make is: don't leave biotechnology to "the

experts.” We can certainly acknowledge and respect the work that scientists and engineers do and the specialized knowledge that they have, without jumping to the unwarranted and dangerous conclusion that this very small group of people alone should make all decisions regarding biotechnology.

At what stage and in what capacities are other views and voices and values brought in to the work of these experts? Too often, ordinary members of the public are presented with a particular device or procedure as a *fait accompli*, as if it had dropped down from the sky, and asked to “respond” to it. We have heard several of our speakers talk about this in yesterday’s activist workshop. The public is asked, in effect, “Here it is, take it or leave it! Will you accept this technology as-is, or will you reject it outright? Are you going to accept it uncritically, or do you reject progress?” By that time, the device in question is already embedded within a particular configuration of material infrastructures, legal and social arrangements, and state, capital, and professional investments that is quite dense and not easily disrupted. Design decisions have already been taken that may have enormous consequences for the people who will eventually use it or upon whom it will be used. It becomes far more difficult, once a technology has already congealed, to meaningfully weigh in on the question of whether the purposes that a technology serves, the values embedded within its design, and the pattern of social power relations that it facilitates or upholds, are the ones that we ought collectively to endorse. As the political scientist Langdon Winner writes:

In a world in which human beings make and maintain artificial systems, nothing is “required” in an absolute sense. Nevertheless... once artifacts such as nuclear power plants have been built and put in operation, the kinds of reasoning that

justify the adaptation of social life to technical requirements pop up as spontaneously as flowers in the spring... In our times people are often willing to make drastic changes in the way they live to accommodate technological innovation while at the same time resisting similar kinds of changes justified on political grounds. (Winner 1986:38)

Think about the hazards of egg donation, about which we have heard quite a bit. Society will, apparently, accept a considerable amount of physical suffering for the sake of research, for the sake of progress. Would we accept a similar level of suffering for the sake of justice, for the sake of equality? To say that we should not leave biotechnology to the experts means that we must strive toward more democratic social relations of science, technology and medicine.

It also means, however, that we must seek to transform the very idea of expertise itself. This means reconsidering how experts are trained, how they are socially produced, and indeed what forms of knowledge and reflection their work requires. In our systems of education and in the ways we structure professional work and rewards we demand that our budding engineers and scientists and physicians demonstrate the ability to excel in very particular kinds of scientific work. By contrast we do very little, in general, to encourage, require, or help them develop habits and skills of social analysis and ethical reflection. Is it so surprising if many biotechnological experts do not consider it part of their responsibility to engage in such reflection?

Another related danger, is that this kind of ethical and social reflection itself becomes yet another narrow form of expertise, called in only at the very end stages of development of new biotechnologies. In the context of discussing recent struggles

surrounding California's Proposition 71 legislation concerning state funding of stem-cell research, the historian Tina Stevens (with whom our speaker Diane Beeson has worked closely on these issues) writes:

Considering the sheer tonnage of paper dedicated to the bioethics of biotechnologies, is the public more aware, more educated, more impassioned for the effort? Sun Microsystems cofounder, Bill Joy, implied an answer when in 2000 he mused over unintended consequences of robotics, genetic engineering, and nanotechnology. Why, he wondered, were so many of his colleagues though aware of the dangers, "strangely silent"? When pressed, they replied in part, that "there are universities filled with bioethicists who study this stuff all day long." "Your worries and your arguments," colleagues told Joy, "are already old hat" (Joy 2000). The proliferation of bioethics, it seems, has induced quiescence among those who produce the technologies of bioethical concern – an ironic legacy for the era that seeded bioethics' flourish. No need to stall, choking on biotechnological controversies – ethics experts will grasp those nettles and so allow production to stay on course.

I hope we can have a discussion today about the advantages as well as the dangers of embracing the role of the "ethics expert," especially since some of us here are among those who are or might be called upon to play this role.

Suggestion #2: Document the Social Worlds of Biotechnology

This leads us, quite naturally, to a second suggestion: document the social worlds of biotechnology. One strategy for reclaiming technology as fully social, is to enter the

places in which these experts do their work, and show just how fully social and cultural it is. Anthropologists of science Sarah Franklin and Margaret Lock write:

Given the importance of avoiding the “impact” model so frequently invoked to address developments in the life sciences – that is, in terms of their “effects upon society” or their “consequences for social life” – it is essential that attention remain focused on what is social about the production of scientific knowledge itself. To undertake this task, it is often necessary to work closely with scientists in the laboratory and the clinic, in order to create interpretations, descriptions, and analytical accounts that document emergent cultural forms...” (21)

Scholars in the relatively young scholarly field of science studies have by now produced a quite large and provocative body of writings along just these lines. Insofar as such work facilitates greater public awareness of and concern with what goes on within the specialized worlds of the biosciences, it makes an important contribution to the broader task of crafting new contexts.

Part of what such research has documented, is just how many other people besides the “experts” any given biotechnology involves. We may tend to associate biotechnology with laboratories, high-tech clinics, and highly educated men in white coats. But the work of any high-status researcher in any lab or clinic actually involves and relies upon many other people, in many different capacities – including vast numbers of women. Recognizing these people is crucial to the task of crafting new contexts for biotechnology. Recall that in the Hwang Woo Suk case, he had pressured junior women on his own research team to become egg donors for the project. Part of what the whole scandal revealed was just how unequal the social relations of science are, and how very

vulnerable to exploitation are some junior women scientists within the scientific world. No informed-consent document will ever fix that; that is a matter of changing the social relations of science.

Within the social world of the laboratory, the high-status experts could not carry out their work without the labor and talent and assistance of many bench scientists and technicians, students, clerical and janitorial staff, and others. Beyond the laboratory, are people who work to assemble, program, repair, sell and maintain crucial items of equipment. Some people serve as the test subjects on whom new devices and procedures are tested. Some people (under varying degrees of coercion and consent) provide the required bodily material: cells, tissues or organs. And some people (usually not the same ones) are the consumers or users at whom the biotechnology in question is targeted. Millions of people subsidize the development of biotechnologies through their taxes, investments, and purchases.

We cannot afford to treat biotechnology as if it were a matter solely for experts, because all of these people are important. We must recognize them, listen to them, learn from them, and find ways of working with them. In my own research, for example, I have come to recognize the critical role of sonographers, the technicians who work with ultrasound, most of whom are women (at least in the U.S.). These sonographers are the ones who actually perform ultrasound procedures, and more than this they have all along been actively involved in developing ultrasound equipment, finding new uses for it, and promoting ultrasound technology to physicians, many of whom were at first quite unconvinced that they needed it. Sonographers are an important part of the social network of this particular technology. It matters a great deal who they are, what they do,

and how they think about what they do. If we wish to include biotechnology within our efforts toward social change, then we must develop a politics that includes as wide a segment as possible of the entire social network surrounding any particular biotechnology.

When it comes to subordinate workers such as sonographers, the social networks of technology that link them to experts, consumers, and others are not so difficult to discern. The same is not true, however, of the people who provide the bodily matter that many biotechnologies require. In connection with the Hwang Woo Suk scandal, the obvious question is: Who provides the egg cells for research on cloning, and what are the circumstances under which they are obtained? We might ask similar questions of many other biotechnologies. Who provided the original cells from which were derived the cell tissue lines used in research laboratories? Who are the people from whom transplanted organs have been, as they say, “harvested”? How and from whom and under what conditions are tissue samples collected for purposes of genetic research?

The difficulty of answering such questions is instructive. To track down who are the people from whom these materials have been obtained is a very challenging and important research task. Nancy Scheper-Hughes and Lawrence Cohen, along with other anthropologists engaged in an organization called *Organs Watch*, have sought to follow to its sources in various poor communities of the global South the trail of kidneys that eventually end up sustaining the bodies of recipients and consumers far away (Scheper-Hughes & Wacquant 2002). Similarly, I have traced, at least in part, the trajectory of one particular fetal ultrasound image, named “George,” from its origins into the public sphere of antiabortion television commercials, “educational” videotapes, Congressional testimony (Taylor 2004b). The medical anthropologist Lesley A. Sharp (2001),

meanwhile, details the struggles to control the shape of such trajectories and their visibility in the case of organ donation. Surviving kin of organ donors seek to link organs to the donors' identities, while organ procurement officials seek to detach them

The trajectories linking that which circulates and acquires value with its origins is, of course, precisely what is at issue in any understanding of commodification. Inquiring into the trajectories followed by the materials of human origin required by biotechnology is one path toward the very general task of understanding how bodies are collectively made and remade and unmade, and how they are very differently valued, in the world that we inhabit.

Suggestion #3: Dismantle the Biotechnology Monolith

One of the hazards in the concept of "biotechnology" that we have discussed above, is the danger of reification. One of the thinglike qualities that we too often tend to attribute to biotechnology is a monolithic unity. We need to be alert to important differences that may be obscured by a blanket term such as "technology," or the only slightly more specific "biotechnology."

There are, in the first place, important differences between different technologies, in the kind of social relations associated with them. Some would argue, for example, that nuclear power technology is compatible only with a highly centralized and hierarchically ordered state, while solar energy technology lends itself to more democratic or anarchistic forms of social organization. Similar arguments may apply to biotechnology. We might want to be cautious about any argument that posits technology as "requiring"

anything, but still – such differences are real enough, and worth considering. Different biotechnologies may call for different analyses.

Yet even to speak of any one biotechnology as if it is a homogenous entity may be a mistake. If biotechnologies are, as we have argued, part of social life, then it follows that biotechnologies like social life must be locally variable, while also interconnected globally. What is the relevant context for exploring differences within a particular biotechnology, in any given case? Should we look for differences between nation-states, or between class strata, or between the global North and the global South, or should we frame our inquiries in some other manner altogether? There can be no one answer, of course; working to understand technology as part of social life will necessarily present for us all the same conceptual choices and challenges as does the study of social life more generally. Yet feminist scholars of science studies have done interesting work along these lines, showing how biotechnologies are made local, through the actions of the ordinary women who engage with them. I have in mind here, for example, the 2000 volume Bodies of Technology edited by Ann Rudinow Saetnan, Nelly Oudshoorn, and Marta Kirejczyk. Similarly, medical anthropologists such as Rayna Rapp and Karen-Sue Taussig and others have chipped away at the monolithic appearance of genetics, by documenting the very different ways that different communities affected by rare genetic conditions have organized their relations with genetic researchers.

Individual informed consent is not the only model available for thinking about how best to organize such relationships. Some communities, in the U.S. especially certain Native American communities, require that genetics scientists wishing to conduct research among them must present their projects for communal approval. Some other

communities, especially people affected by dwarfing conditions, impose certain conditions on their participation in genetic research. Thus for example they may specify that any researcher who takes bodily samples must agree to share those samples with all other researchers – they should not have to be repeatedly stuck with needles like pincushions, just because scientists do not want to cooperate with each other. Yet another example is provided by Susan and Patrick Terry, the parents of two children with a rare genetic disease called PXE. The Terrys founded an organization of families affected by this condition, and this group has taken an active role in not only controlling scientists' access to them but actually to have a substantive say in what sort of research gets done. All of these are different ways that genetic research has been made local, and they show us that a variety of models for social relations around biotechnology are possible, beyond the standard model of the individual subject granting informed-consent to the individual researcher.

To further inquire into how biotechnology is made local, and really dismantle the biotechnology monolith, we might need to try to let go of assumptions about what can count as part of biotechnology. When people make biotechnology local, they may do so in some very surprising ways. The anthropologist of religion Margaret Wiener writes that:

Arguably the most consequential result of science studies is the attention it draws to a phenomenon obscured from our view by insistence on a “modern West” different from all of the rest . . . technoscience is only one of many ways human traffic with nonhumans. (Wiener 2004:10)

For this reason, Wiener suggests that anthropologists should collapse magic, science and religion together as “overlapping projects of world-making.” Rather than approach the biotechnology as a distinct entity, then, the boundaries of which we implicitly adopt as the parameters framing our own inquiries, it may (also) make sense to explore science as a “materializing practice” (Wiener 2004) that upon examination may turn out to be both similar to and quite thoroughly enmeshed with witchcraft, magic, and other matters having little obvious place in the high-tech laboratory and the clinic.

Suggestion #4: Listen for the Stories

The fourth and final suggestion I shall offer here, is that we must listen for the stories. I mean this in several ways. First, as I have argued here at some length, there are ideas and narratives implicit in the language and discourses surrounding biotechnology, that are perhaps most powerful when they are least visible to us. We have spoken already of the hazards of reification. Equally hazardous are narratives about the inevitability of progress, or the need to catch up with technology, or the (endlessly deferred) promise of an eventual cure. We simply cannot separate biotechnology from the “hype” that surrounds it. Indeed, Sarah Franklin and Margaret Lock argue that such representations may themselves be understood as forms of animating technology:

The speculative, imaginary, or promissory dimensions[are] the most generative and lively components of the “lives themselves” that populate the world of the new biologicals In addition to commercial futures, there is offered a host of speculative promises and hopes about improvements to human and animal health, more sustainable and reliable agricultural methods, the

preservation or restoration of extinct species, and greater knowledge about the origins and interrelatedness of life forms. Although the usual position in social and cultural research on the new genetics and biotechnology is to remain critical of such promises, it is also clear that a danger exists in underestimating the imagined or promissory futures of these life forms....

In other words, the stories that circulate about biotechnology can themselves have very real material consequences. If we tell a story about how a particular technology will help find a cure for cancer, and if that story leads stock prices to go up and investments to flow in, which enables the purchase of new equipment and the undertaking of new projects, then that story is not simply a representation of the technology, but actually an important part of it.

In addition to making explicit such stories implicit within the rhetoric of biotechnology, a second important way we can listen for the stories is by attending to the words and views and experiences of the full range of people involved with biotechnology. Let us work to make more people's voices audible in discussions of biotechnology – and let us listen to them for what they may have to teach us. We have heard a lot about the women who provided eggs for Hwang Woo Suk's research team, but we have not heard so much from them. We need to hear from them, and from others besides the experts, the legislators, and the leaders.

And as we listen to these stories, let us listen also for the silences, and what doesn't get said, the outsides of the discourse of biotechnology. Some scholars contend that "everyone now is required to have an opinion about stem-cells" – and perhaps this is true, but if so we need to ask why people are not required to have opinions about, for

example, poverty and hunger? To engage in a truly critical way with biotechnology, we cannot speak only of biotechnology alone. We must draw attention to these other areas of silence and darkness.

Our challenge is to change the subject, change the terms of the debate, change how we think about biotechnology and women's bodies, and how we enact them. I look forward to our conversations here as an opportunity to work together toward that end.

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