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Contextual Methodology in the Science and Religion Dialogue
(A Talking Paper)
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Abstract

Both science and religion offer us information about "who we are" in the world *vis*. a *vis*. other humans, other animals, and the rest of the natural world. Each has their mode of discourse and method for exploring reality. Often, in conversations about science and religion, the bridge between the discourses and methods of each discipline is unclear and the conversation remains in the area of how to *do* "science and religion."   It is my contention that these methodological traps arise out of an acontextual approach to theology and science (or, more broadly, religion and science). Neither religion nor science (both human-created discourses about the world) is acontextual; neither is an end in itself. In this paper, I will explore a contextual method for "doing" religion and science (along with a brief discussion of contextual epistemology) in light of two basic topical problems: Global Climate Change and Environmental Justice. In doing so, I highlight how this topic-centered, contextual method both maintains the integrity of each discipline's approach while at the same time critically engaging each discipline's approach in an open dialogue toward creative solutions to specific problems.

Key Terms: Communicative truth; remoteness; reversal; contextual theology; environmental justice; climate change.

Biography

Whitney Bauman serves as the Managing Editor for Theology and Science and is a PhD student in Philosophical and Systematic Theology at the Graduate Theological Union. He received his MTS from Vanderbilt Divinity School in May 2000, and a BA in Psychology from Hendrix College in May 1998. Deeply concerned with environmental issues, Whitney wrote his MTS thesis on "Ecological Concepts of the Self" and is presently on the Steering Committee of the Theological Roundtable on Ecological Ethics and Spirituality (TREES) at the Graduate Theological Union (GTU) in Berkeley, CA. His current interests include eco-justice issues in theology, especially as they pertain to issues of theological anthropology, unity and diversity, and violence.

Both science and religion offer us information about "who we are" in the world *vis*. a *vis*. other

humans, other animals, and the rest of the natural world. Each has their mode of discourse and

method for exploring reality. Often, in conversations about science and religion, the bridge

between the discourses and methods of each discipline is unclear and the conversation remains in

the area of how to *do* "science and religion."   Sometimes, it is argued, science is subsumed

under religion and/or religion is subsumed under science. That is, the uniqueness of one or the

other field is compromised in the dialogue. Other times, there is almost no dialogue between

science and religion at all, but two different (non-overlapping) realities. And still other times

people claim that there is some type of consonance between the knowledge gained from the

sciences and that gained from religious thought.

It is my contention that these methodological traps arise out of an acontextual approach to

theology and science (or, more broadly, religion and science). Neither religion nor science (both

human-created discourses about the world) is acontextual; neither is an end in itself. When

treated as such, they become idols or platforms in need of defense. However, when both are

recognized as valid interpretations of reality and are seen as being embedded in a specific

context, the ends of the dialogue are made explicit and religion and science become instruments

toward creative solutions to a given problem in a given context.

In this paper, I will explore a contextual method for "doing" religion and science (along

with a brief discussion of contextual epistemology) in light of two basic topical problems: Global

Climate Change and Environmental Justice. In doing so, I hope to highlight how this topic-

centered, contextual method both maintains the integrity of each discipline's approach while at

the same time critically engaging each discipline's approach in an open dialogue toward creative

solutions to specific problems. Finally, I hope to offer some suggestions for how this method

might be useful in thinking about the future of the science and religion dialogue in general, and

the Local Societies Initiative Program more specifically.

Prolegomena

Before beginning this task, I'd like to provide a constructive etymological analysis of the three-

word name of this program: "Local Societies Initiative."

    Local. "Local" comes from the Latin *locus*, meaning "a place." We all work and live and

exist from "a place;" not only one place, but also many places. Our lives are lived at the

intersection of places. We live on the earth, in a country, in a state, in a town, in some type of

building, sometimes with others. We live in eco-systems, with other animals and life forms.

Likewise, our locales/places are defined by where we work and what we do: our place is the

academy, the church, mosque, or temple, etc. Finally, in an era of globalization our places are

often quite literally made up of many different places depending on the food we eat, the clothes

we wear, the types of fuel we use for energy, etc. Each of these places, then, intersects at a

nexus that we can simply call "the local." Thus, the global is included in the local and they are

impossible to separate. I propose that the "Local" in "Local Societies Initiative" calls for us to

work from within our places, with an eye toward and understanding for how the many different

"places" affect our own places and how our places affect other places. It is a call to "do science

and religion" from a specific place, from within a context, with the understanding that our own

context is not dis-connected from other contexts.

    Society. "Society" comes from the Latin *socius*, which can be translated into English as

"companion," and hints at "friendly association with others" or "a group of people living

together in an ordered community." Now if the root word *socius* is synonymous with "companion", which literally means "with bread" (*com-panis*), then society can be thought of as people sharing bread together, or even as table fellowship. Society, then, involves questions of "who is at the table" and "who is not at the table." It involves questions of economics and justice. When thinking about the "science and religion" dialogue from a specific place, we must ask what voices are represented at the table. Likewise, we must ask in what manner the food is placed on the table and even how the table is made. Hence, the "Society" in "Local Societies Initiative" is a call to "listen to the many voices"; it is a call to open the dialogue beyond the walls of the academy; to hear what the whole society and the more-than-human life therein deems important. It is a place from which an agenda for "science and religion" can be forged and re-forged; it is claiming a space for all at the table.

Initiative. "Initiative" comes from the Latin *initiatus*, which stems from the Latin *inire* or "to go into, enter upon, begin." In its noun form, it can also refer to ambition, drive, dynamism, or energy. Placing these two meanings together, "initiative" means the energy/dynamism to begin or enter into or upon something; to "begin with energy and dynamism" hints at "creativity". In light of our place and our place *vis. a vis.* the societal table, we will need the energy and dynamism to enter into new conversations and continually enter into dialogue with one another. Thus, the "Initiative" in "Local Societies Initiative" refers to the creativity and dynamism it takes to engage in dialogues within societies from specific places, and toward creative solutions.

In summary, the meaning of "Local Societies Initiative" within the context of the science and religion dialogue is: to frame "science and religion" from within the intersections of places that we call "local" (which, remember includes an eye toward the global), in a way that ensures

that all voices will be represented at the table and be nourished by the dialogue, and toward

creative transformation of the many voices at the table, the society, and the many places within

that society. It is nothing less than placing science and religion within the context of creatively

transforming society. It is from this understanding of "Local Societies Initiative" that this paper

proceeds.

Methodologies in Science and Religion

We are all familiar with the different models/methods of relationship between the natural

sciences and religions so I will not rehearse them here.[1] I will only mention that different peoples

in different places employ any given number of methods at any given time. These methods, for

the most part, *describe* how "science and religion" are related to one another and/or offer

constructive proposals for how they ought to relate to one another. For example, the conflict,

independence, dialogue, and integration models put forth by Ian Barbour are descriptive of the

various ways in which people have related information from the sciences and information from

religions.[2] The model of hypothetical consonance that Ted Peter's proposes, on the other hand,

is both *descriptive* of the "commonalities" that might be found between science and religion, and

proscriptive because it has an eye toward a hoped for future in which science and religion will be

in harmony. The hypothetical consonance model claims that because the future is "not yet" all

theological and scientific language must be hypothetical.[3] Different models, then, can both

describe and prescribe how science and religion relate or ought to relate to one another.

Instead of making critiques of the various models, I will simply offer two models that I

find most point toward contextual engagements between science and religion. What is important

about these two models is that they *take the context as primary* and as most relevant rather than

placing highest importance on how the abstract disciplines of "science" and "religion" might

engage in a conversation. They start from the simple fact that in any context, science and religion

do relate in a number of ways.

One model that I find most helpful is the "ethical overlap" model as it is described by

Ted Peters. This model assumes that we need both science and religion to address specific

problems in our worlds.[4] Sometimes scientific and religious knowledge will point toward a

common solution, and at other times they will critique one another. The point is that each will be

used to work toward a solution to a specific problem, instead of becoming Ends in themselves in

a way that requires of each an apologetic defense of their auto-nomy.

Another model that I find to be inclusive of different ways in which science and religion

relate is that described by Mary Midgley as the "model of the maps." It describes how we might

relate the discordant information we receive from science and religion into some sort of whole,

while acknowledging that no map describes completely the whole.[5] Beyond this, it

acknowledges that both can be true, even if those truths are at odds. In other words, I think this

model is one that acknowledges diversity without forcing the diverse truths into some type of

common solution. As Midgley notes:

> But all of these questions [that different maps bring] are still about a single world, a
> world so large that it can be rightly described in all these different ways and many more.
> … The plurality that results is still perfectly rational. It does not drop us into anarchy or
> chaos.[6]

This method acknowledges that truths are partial and that disparate truths can exist side by side

in a world that is never fully known.

Midgley does highlight the importance of relating the various maps "that answer

questions arising from different angles."[7] However, this does not necessarily indicate a harmony

or unification of truths. The project of relating various maps is carried out through bringing the

maps to a specific context while not forgetting how that context fits into the whole. Out of this method, then, we may find that "science and religion": are in conflict, find some common ground, operate at different levels of meaning, are integrated, *etc*. In other words, it seems to be a good model for "bringing the many voices to the table" and allowing a plurality of methods to exist without assuming that the methods and truths will necessarily converge. There is then, as in the "ethical overlap" model an ethical impetus to look at many maps and to be interdisciplinary. Implied in both of these models is a certain type of epistemology and it is to a brief discussion of this epistemology that I now turn.

Contextual Epistemology in Science and Religion

One distinguishing factor of both the "ethical overlap" model and the "model of the maps" is that the purpose or End of the dialogue arises out of a socio-ecological need to address a specific problem. There is no looking for some type of unchanging answer to how things are, nor is there an assumption that there is one truth to be had; rather, the wholeness of reality and the truths therein are of a processive nature. The wholeness comes out of the desire to bring about a change for the better, for all life in the present with an eye toward future life. The truths that are hit upon now as solutions to problems may, in the future, cause other problems that cause future lives to reject current truths. Likewise, old truths that function in the future to maintain the well-being of life may be kept by future generations. The point is that our historicity does not allow us to discern completely which truths will be seen as "antiquated" or as "good insights." Thus, the truths and reality we seek in the science and religion dialogue should be focused towards our contemporary context, while not forgetting that we live in relationship to past and future life.

These models, then, call for what many feminist and Ecofeminist philosophers and theologians have described as a "communicative" form of truth.[8] This theory of truth assumes that truth is processive and that it is thereby mutable. Rather than adhering to some type of absolute Platonic Form that we all must try to intuit or reach for, communicative knowledge of truth comes out of our situatedness and through our dialogues with one another. Of course we will all bring different truths with us to a dialogue; but through communication over a specific topic, new truths will emerge.

This epistemology does not escape the problem of truth criteria. In other words, this epistemology (as all other epistemologies) requires some underlying beliefs about ontology and values that guide the organization of our truths toward creative and transformative actions. Underlying this communicative epistemology is a relational anthropology; "truths" both from the world's religions and the natural sciences could easily point toward supporting this type of relational anthropology. Truth criteria in communicative knowledge are founded in a vision of social and ecological justice. What is important is not that "Justice" be done at any cost, but that social and ecological justice adheres to the principle of "right relations" among human beings and between humanity and the "more-than-human-world." Claiming that to be human is to be relational or that the ends of social and ecological justice are admirable Ends to work towards must be done from within a specific context; however, they cannot be ignored by any context. It is to some contextual examples that I now turn. In doing so, the truths emerging form these examples will be placed in dialogue with your own truths and your own context.

Topics in Ecology, Theology, and Ethics

Over the past two years, the members of TREES have been engaged in a series of topic-centered projects under the broad title, "Topics in Ecology, Theology, and Ethics." These semester-long foci have included: Global Climate Change, Population and Consumption, Land and Agriculture, and Environmental Justice. These topics were addressed from within our LSI's location at the Graduate Theological Union, next to UC Berkeley, in the multi-layered ecosystem of the Bay Area, as people in the United States and human beings on the planet earth. How is that for overlapping contexts? Rather than going through a list of the different types of things we covered in each of the 4 topics, I will discuss two of them in relationship to specific theoretical points that emerged from the different "topics" covered. In doing so, I hope to shed light on the aforementioned, contextual-method for "doing" religion and science. I turn first to a discussion of Global Climate Change and the Question of Human Agency.

Global Climate Change and the Question of Human-Nature Agency

The first topic that our LSI project focused on was "global climate change." Over the course of the semester we read theological, ethical, and scientific accounts of the problems raised by Global Climate Change. Our context, then, was dictated by the topic of global climate change, and by the fact that we were looking at this with an eye toward what science, ethics, and theology had to bring to the conversation about climate change. We also paid special attention to the projected disparities that will result from climate change: *e.g.*, the northern hemisphere will be much less affected than the southern hemisphere. Finally, we focused on how our very local actions (driving, supporting the industrial causes of global climate change, *etc*.) affect other localities on a global scale. In the process of gathering information, we also began to use our

knowledge to search for creative solutions. One theological-philosophical problem that emerged in this search for creative solutions was that of human agency *vis. a vis.* the rest of the natural world.

In a forum given by Dr. Inez Fung, a climatologist at UC Berkeley, we explored the scientific research being done to distinguish between the "natural" and "human" forcings of global climate change.[9] In other words, how might we determine the degree of climatic change due to "natural" fluctuations in the climate and the degree due to human causes? Though the science of this is still new, the majority of scientists agree that since the industrial revolution there has been a greater increase in atmospheric CO_2 than at any time in the last 100,000 years; furthermore, the amount of CO_2 currently in the atmosphere exceeds the standard deviation over the past 1000 years. Finally, there is a correlation between an increase in CO_2 in the atmosphere and an increase in global temperature.[10] Clearly, since the industrial revolution and beyond, humans have had a clear effect on the atmosphere.

As interesting as all of the data is on global climate change, I think the most interesting points raised during the semester were in regards to human agency in relationship to the rest of the natural world. Clearly, humans are interrelated with the rest of the natural world. How else would our activities in the world affect the overall climate of the planet? Accordingly, the issue of how the climate change will affect the planet is an issue of both ecological and social justice: both humans and the more than human world will be affected by human actions. However, the solution is not to be found human action alone. Much to the chagrin of world-views that see nature as passive and humanity as active, nature responds to our action. Thus, whatever solution we come up with, we will have to allow the "voice" of nature to chime in. As Inez Fung said in her forum, we have "kicked the system" and we are not sure how nature will respond.

Another implication of the effects of climate change is that the dualism between "natural" and "moral" evil no longer has legs upon which to stand in many cases. For example, will tornados, hurricanes, floods, landslides, or for that matter skin cancers, other cancers, and respiratory illnesses be attributed to "natural" or "moral" evil? If human actions are the actions that exacerbate atmospheric changes, are not the above-mentioned evils impossible to attribute to "nature" alone? In other words, the nature-human distinction is blurred even more in light of the problem of global climate change. The distinction between "us" and "them" in general is blurred in light of the problems of global climate change: each action affects the whole.

What type of ethics might arise out of this focus on global climate change in light of the shared agency of humans and more-than-human nature, and in light of the interrelatedness of our actions? Two types of ethical responses should be noted. First, Carolyn Merchant has developed a notion of "partnership ethics."[11] Partnership ethics recognizes shared agency between humans, and between humans and the rest of the natural world. We cannot come up with a "once-for-all" solution; rather, in partnerships with peoples and the rest of the natural world, we must come up with solutions that are open to change. This should be done with an eye toward future generations. Second (and similarly), Val Plumwood speaks of an ethic of "negotiation."[12] This negotiation model also takes into account the conflicts that arise because power is not shared equally by all; thus, negotiation among humans and between humans and the rest of the natural world is needed. Both of these models acknowledge shared, relational agency in the world, and I think they will be helpful in coming up with solutions to the problem of global climate change.

Likewise, theology is rich with conceptual resources for addressing problems that arise out of global climate change. One such problem that theology can address within the Christian

community is that of pre-millennial apocalyptic thinking. Theologians such as Catherine Keller

are making giant strides in these directions. Keller rethinks the traditions of both apocalyptic

thinking and creation *ex nihilo* in light of contemporary eco-social problems and in dialogue with

chaos theory.[13] In doing so, she points out that neither a temporal "Beginning" nor messianic

"End" is biblically based. Rather, creation is "out of the depths" and the final vision of

revelation is a "renewed creation" on this earth.

The theological tradition of *ex nihilo* and of seeing eschatology as a temporal end rather

than—as the Greek meaning dictates—a spatial or temporal edge has wreaked havoc on the

human understanding of how we live within this planet. In other words these traditions lead to

an understanding of God as the arbiter of events and holder of all agency, and to thoughts of a

time when God will return and remake this planet (or in some pre-millennial visions this planet is

even destroyed).[14] Traditional apocalyptic and *ex nihilo* traditions have been, in other words,

earth-denying. What we need, then, is to rethink the God-world-human relationship in a non-

earth-denying way.

These are the types of theological contributions that can begin to address the overall issue

of "human agency" *vis. a vis*. the rest of the natural world, and specifically with an eye toward

solving problems that arise from a specific issue such as global climate change. As stated earlier,

no one solution will do; some solutions to the problems that arise out of global climate change

might be: setting aside monies for "third world" countries to deal with global climate change,

which has been chiefly caused by "first world" countries; discouraging peoples from living so

close to coastal regions; addressing how the climate change will adversely or positively effect

agricultural regions and setting aside funds to respond to these problems; designing more fuel-

efficient technology and developing cleaner, renewable energy sources (especially in light of the

current wars being fought over oil); reducing consumption and energy use among the wealthy in

first-world nations; anticipating the problems that will arise due to forced migrations; and finally,

encouraging ministers, faith practitioners, theologians, and philosophers to incorporate an

analysis of global climate change into their work. Other topics of focus will present different

theological, scientific, and ethical problems and it is to the topic of environmental justice that I

now turn.

Environmental Justice: Remoteness, Communicative Truth, and Praxis

Environmental Justice and the Environmental Justice Movements is a multi-layered, multi-

contextual topic. It addresses the issue of how people of color and poor people have been

disproportionately afflicted with the environmental ills of industrial societies, and have not

shared equally in environmental goods. It is both a global and a local issue. From within the

context of the United States, Environmental Justice has included issues such as: stealing lands

from Native American communities; placing nuclear waste facilities on Native American

reservations; citing toxic waste facilities in African-American and Latino communities and in

economically poor communities in general; pesticide exposure in agricultural labor; bio-

monitoring and toxicity studies; and exclusion of people of color and "the poor" from decision-

making processes that affect their communities. Throughout the course of a semester TREES

focused on the issue of "environmental injustice" and touched on many of these areas. I will

now discuss how issues such as "remoteness" and "communicative truth" emerged out of the

process of studying environmental justice from ecological, theological, and ethical perspectives.

     Remoteness. "Remoteness" is defined by Val Plumwood as the ability of people (with

money) to remove themselves from adverse environmental impacts caused by industrial

production and waste.[15] That is, "the wealthy" generally do not have to deal with toxic waste

facilities and can afford to purchase things such as "organic" foods, bottled water, and homes in

relatively toxic free environments. At the same time, the high consumptive activities of the

wealthy are the cause of most ecological ills. A second facet of "remoteness" is that these same

"wealthy" peoples are the ones making political decisions: whether through the electing of

"wealthy" politicians or through lobbying politicians with money at the local and federal levels.

Thus, a problem emerges; the people who are making decisions about economic, civil, and

environmental policies are the same ones who are most "remote" from the effects of these

decisions.

One such instance of remoteness took place at Bayview Hunter's Point on the

Southeastern end of San Francisco. Bayview Hunter's Point is a predominantly African-

American community with a smaller Latino population. Likewise, it is the most economically

poor region in San Francisco. The Bayview Hunter's Point sewage treatment facility receives

upwards of 80% of all of San Francisco's raw sewage,—the metaphor of what the city is doing to

Bayview is very clear here—hosts a Pacific Gas and Electric Plant, several superfund sites (one

of which is an abandoned military base), and a metal recycling yard. As part of TREES' focus

on "Environmental Justice," we took several students on a toxic tour hosted by Marie Harrison of

the Greenaction network in Bayview.[16]

One of the issues that came up during the tour was a battle that took place between the

Ocean Beach and Bayview Hunter's Point communities within San Francisco over the issue of

sewage treatment. The city was going to add to the sewage treatment facility at Ocean Beach, a

community that is wealthier and whiter than Bayview. Though the Bayview community argued

that it already receives 80% of San Francisco's sewage, the Ocean Beach community launched a

N.I.M.B.Y (Not-In-My-Backyard) campaign that led the city to increase the sewage treatment

capacity in Bayview. In this case, the Ocean Beach community was able to increase its own

remoteness from ecological ills at the expense of the Bayview community. Clearly, one thing

that remoteness involves is the N.I.M.B.Y. syndrome. This syndrome was also very popular in

the anti-nuclear waste facility movements of the 1980's.

Another instance of "remoteness" is found in "air pollution rights." These are "air rights"

that companies can sell and trade to one another in order to ensure that only a certain amount of

air is being polluted. In theory, it sounds like a good environmental idea. In reality, it creates a

situation in which certain industries, such as the Pacific Gas and Electric plant in Bayview

Hunter's Point, can pollute more than the amounts that regulations stipulate by buying more "air

rights." Hence, the "air right" solution is a solution that is "remote" from specific locations and

eco-social places. What might be a solution to overcoming "remoteness" in decision-making? I

now want to suggest how the concept of communicative truth (described earlier) can be helpful

in coming to solutions and overcoming "remoteness."

Communicative Truth. Another insight that emerged from the environmental justice

forum series, course, and toxic tours to Bayview Hunter's Point and the City of Richmond was

that there are many conceptual "maps" brought to the issue of environmental racism and

injustice. Dr. Dara O'Rourke of UC Berkeley brought a (scientific) map to the topic of

environmental injustice.[17] Dr. O'Rourke researches the science behind claims of "environmental

injustice." In doing so, he looks at such research as: correlation studies between race, class, and

toxic waste cites; bio-monitoring studies that analyze toxicity in the body; and cancer and asthma

rates as they pertain to people living in proximity to toxic waste sites. One thing that the science

points to is that race is a larger determining factor in the citing of toxic facilities than is class.

Likewise, people of color and "poor people" have higher incidences of cancer and asthma (probably due to both more exposure to toxic chemicals and less access to healthcare). Thus, scientifically, we can say that there is a problem.

The maps brought to the issue by community organizers such as Marie in Bayview or Henry Clark in Richmond is quite different.[18] It is a map that comes from watching people in the community get sick and die. It is a map that sees the daily effects of toxic industries and hazardous waste sites. The language is that of "community, health, and justice" rather than any type of scientific language.

Likewise, theologians, ethicists, and philosophers bring maps to the situation. One such map is precisely the concepts of "remoteness" and "communicative truth." Others could include biblical images such as that of the Kingdom of God. The preferential option of the poor can be helpful here for both "human poor" and "non-human poor." Another helpful image comes from analyses of the biblical Exodus story that guard against ethical "reversals" (e.g., we ought not rejoice too much in the Exodus story uncritically because it meant displacing the Canaanites, drowning the Egyptians, and enslavement of women).[19] This means that solutions are not as easy as "either this or that." Likewise, it highlights the interrelatedness of all lives, even those of the oppressed-oppressors.

Through an understanding of "communicative" truth, all of the various sources of knowledge are put into dialogue toward creative solutions to specific problems. Even the industrial polluters should be represented in the dialogue. The reality is that we use energy and that we create waste, this cannot be avoided. However, through an understanding of communicative truth and a partnership type of ethics, multiple suggestions toward creative solutions can be made.

Some suggestions might be: creating subsidies for industries that lower toxic emissions; setting up funds for research into non-polluting or minimal-polluting technologies;[20] making sure that superfund cites in poor neighborhoods and communities of color are cleaned properly and with as much frequency as they are in wealthier areas; reparations for those affected by toxic waste facilities; and equitable redistribution of both environmental goods and ills. In all of these solutions, the many voices, with their many maps should be present, including the representative voices of the more-than-human-world. Likewise, an eye should be kept toward the future life on the planet.

Conclusions and Future Directions: Concientization, Ethics, and Theo-Praxis

In conclusion, I would like to return full circle to a discussion of the "Local Societies Initiative." Here, I would like to offer a possible way in which the future of the "science and religion" dialogue might proceed. This future employs the type of contextual methodology discussed throughout this paper. This methodology can now be described as one of: Conceintiziation, Care-Justice Ethics with an "option for the poor", and Theo-Praxis.

If you remember, the "Local" of the Local Societies Initiative refers to the importance of knowing places and the relationships between places. Knowing place is, I think, best achieved through the process of Friere's "concientization."[21] This concientization will include information from the sciences about the ecological community and earth community; it will include information from peoples about the history of the community, and information from social sciences. It will also include information from theology about what "place" means and what "human beings" are *vis. a vis.* the rest of the natural world. This might also be aptly described as a "theological re-alignment" of the sort that many liberation theologians speak of.[22]

However, this "theological realignment" is one in which we wake up to our place in community, our place in the rest of the natural world, and our place in the webs of interconnections that are a result of the process of globalization.

As stated in the opening of this paper, "society" refers to table fellowship and issues of who is at the table. We might think of it here as an Ethic of Care and Justice. Though these two ethical models have often been placed in a dualism of mutual exclusion, I would assert (along with Val Plumwood) that there are inextricable.[23] Care cannot be understood without justice and *vice versa*. Both are necessary for "right relations" among humans and between humans and the rest of the natural world. In light of the many eco-socio-economic problems that we face, and in light of our interrelatedness and the inequitable distribution of socio-ecological goods and ills, an ethic of "care and justice" must include a "preferential option for the poor." For the science and religion dialogue found in "Local Societies Initiatives," this means using our disciplines toward creating a more just and ecologically sustainable planet. (Perhaps, then, we might consider diverting some funds from space exploration and put them where they are desperately needed on this planet.)

Finally, the Initiative, of "Local Society Initiative" referred to the creative energy needed to dialogue toward creative solutions to specific problems. This, I see as an impetus for theo-praxis. Creative energy is needed in coming up with solutions to the multiple problems that we face. Theological visions of the Kingdom of God and an understanding of shared agency among God, the world, and humanity might lead towards a praxis that is not based upon "once-for-all" thinking, but upon creative thinking that seeks transformations toward a better life for all life on the planet, without becoming discouraged and passive when (inevitably) new problems emerge. As Hannah Arendt observed, we can never be certain of what effect our actions will have in the

future,[24] thus, we must continue to create the space where communicative knowledge can lead to

ever-more creative solutions toward a more just life for all life on the planet.[25]

Endnotes

[1] One could refer here, for example, to Ian Barbour's classic text, *Religion and Science: Historical and Contemporary Issues* (San Francisco, CA: Harper, 1990); Ted Peters, ed., *Science and Theology: The New Consonance* (Boulder, CO: Westview Press, 1998), esp. chapter 1; or Christopher Southgate, *et al* provide a good overview in *God, Humanity, and the Cosmos* (Trinity, 1999).

[2] Barbour, *Religion and Science*, 77-105.

[3] Peters, *Science and Theology*, 18-19.

[4] Peters, 19-20.

[5] Mary Midgley, *Science and Poetry* (London: Routledge, 2002), 81-83.

[6] Ibid., 82.

[7] Ibid., 83.

[8] This type of communicative, situated truth and ethics can be found in such works as: Donna Harraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective" in Evelyn Fox Keller and Helen E. Longino, eds., *Feminism and Science* (Oxford: Oxford University Press, 1996), 249-263; Sandra Harding, "Rethinking Standpoint Epistemology: What is 'Strong Objectivity'?" in Evelyn Fox Keller and Helen E. Longino, eds., *Feminism and Science* (Oxford: Oxford University Press, 1996), 235-248; Val Plumwood, *Environmental Culture: The Ecological Crisis of Reason* (London: Routledge, 2002), especially pp. 167-195; Rosemary Radford Ruether, *Gaia and God: An Ecofeminist Theology of Earth Healing* (San Francisco: Harper, 1992); and Ivone Gebara, *Longing for Running Water: Ecofeminism and Liberation*, trans. by David Molineaux (Minneapolis, MN: Fortress, 1999).

[9] Dr. Inez Fung, "The Human Impacts on Global Climate Change," (Graduate Theological Union: September 18, 2002), a public forum sponsored by the Theological Roundtable on Ecological Ethics and Spirituality at the Graduate Theological Union.

[10] See the Report by the Intergovernmental Panel on Climate Change for climate details of the last 1000 years: http://www.ipcc.ch/, which also contains several scenarios for projected temperature increases. For climate changes over the past 420,000 years, see the US Global Change Research Program web-site: http://www.usgcrp.gov/usgcrp/seminars/990923FO.html. Though the author's of this report cover 420,000 years, the further back in time we go, the less accurate our readings (mostly from ice cores) become. Hence, I focus on the past 100,000 years.

[11] Carolyn Merchant, *Reinventing Eden: The Fate of Nature in Western Culture* (New York, NY: Routledge, 2003), see especially chapter 11.

[12] Plumwood, *Environmental Culture*.

[13] See: Catherine Keller, *Apocalypse Now and Then* (Boston, MA: Beacon, 1996); and *Face of the Deep: a Theology of Becoming* (New York: Routledge, 2003).

[14] Carolyn Merchant in *Reinventing Eden* (cited above) describes how the Christian concept of Re-Creation has also been adopted by science and technology. In this "positivist" vision, science and technology are used to recreate a New Paradise on earth. Of course, the problem is that there never was such a "pristine" nature and the assumption that human's can create such a nature is actually destructive.

[15] Plumwood, *Environmental Culture*, 71-82.

[16] Information about the Bayview Hunter's Point community and their struggles against environmental racism and injustice can be found at: http://www.greenaction.org/.

[17] Dara O'Rourke, "Environmental Policy and Environmental Injustice," (Graduate Theological Union: May 4, 2004), a public forum sponsored by the Theological Roundtable on Ecological Ethics and Spirituality at the Graduate Theological Union.

[18] Dr. Henry Clark is founder of the West County Toxics Coalition in Richmond, CA, and has been a community organizer for more than 30 years. In Richmond, the primary environmental justice problems are the result of the Chevron-Texaco refinery located in that community.

[19] A theology of liberation, when working in a mode of "reversal," can then become oppressive to "others". Delores Williams discusses this in chapter 6 of her *Sisters in the Wilderness: The Challenge of Womanist God-Talk* (Maryknoll, NY: Orbis, 1993).

[20] One type of technology that is promising here comes out of Biomimicry, or non-toxic technologies that mimic nature. See: Janine M. Benyus, *Biomimicry: Innovation Inspired by Nature* (Perennial, 2001). Also the concept of "cradle-to-cradle" technologies is a helpful one: William McDonough and Michael Braungart, *Cradle to Cradle: Remaking the Way we Make Things* (North Point Press, 2002).

[21] Paulo Friere, *Pedagogy of the Oppressed* (New York: The Seabury Press, 1970), see especially chapter 1.

[22] Many of the early Latin American liberation theologians experienced a "theological realignment" when they returned to a situation of poverty after theological education in Europe. This forced them to "re-think" their theologies in light of "the poor." Leonardo Boff describes this process in chapter 5 of his *Introducing Liberation Theology* (Maryknoll, NY: Orbis, 1987).

[23] Plumwood, *Environmental Culture*, 167-195.

[24] On this point, see Hannah Arendt's discussion of Action in chapter 5 of *The Human Condition* (Chicago: University of Chicago Press, 1958). Here she states the nature of action as being inherently unpredictable. For example: "Action reveals itself fully only to the storyteller, that is, to the backward glance of the historian, who indeed always knows better what it was all about than the participants…Even though stories are the inevitable results of action, it is not the actor but the storyteller who perceives and 'makes' the story" (192). This is the case precisely because the effects of actions are completely unpredictable. Likewise, revelation and its ethical mandates can never be "once-for-all" and total in this life; rather, it is piece-meal, partial, historical, and continual precisely because each actor is partial, historical, and continual rather than complete.

[25] Rosemary Radford Ruether's idea of continuing salvation/revelation is relevant here. She writes, "Instead of endless flight into an unrealized future, I suggest a different model of hope and change based on conversion or *metanoia*. Conversion suggests that, while there is no one utopian state of humanity lying back in an original paradise of the 'beginning', there are basic ingredients of a just and livable society. … A humane acceptance of our historicity demands that we liberate ourselves from 'once-and-for-all' thinking [in regards to salvation and eschatology]. To be human is to be in a state of process, to change and to die." (*Sexism and God-Talk* (Boston, MA: Beacon Press, 1993 ed.), 254-255.)