



How Gadamer Can Help Save the Salmon: Rethinking the Paradigm of Making

Justin Pack

California State University, Stanislaus

ABSTRACT

This paper argues Gadamer can and should be read as an important thinker of environmental philosophy. I claim the story of the scientific mismanagement of salmon is a sad illustration of the repeated misapplication of science that guided Gadamer's critique of science and modernity. It reflects a paradigm of making that cannot help but see things as objects to be manipulated, managed and improved. I show how Gadamer's philosophy seeks to recover the dignity of things through an "admonition to scientific consciousness to acknowledge its own limits" and a reappraisal of practical rationality.

KEYWORDS

Gadamer, salmon,
science, production,
practical rationality

The Salmon

The impetus for this paper was a PBS Nature documentary entitled *Salmon: Running the Gauntlet*. In its own words, this film tells

The parallel stories of collapsing Pacific salmon populations and how biologists and engineers have become instruments in audacious experiments to replicate every stage of the fish's life cycle. Our once great runs of salmon are now conceived in laboratories, raised in tanks, driven in trucks, and farmed in pens.¹

The film focuses on scientific attempts to revive the salmon populations, which are under threat due to overfishing, habitat loss and the damming of rivers used by the salmon to migrate to their spawning grounds. This scientific effort is the heir of a hundred years of entrepreneurial effort to mass produce salmon through hatcheries. The logic of such efforts seemed clear at the time they were initiated: relatively few fish survived from fry to adult, but industrialized scientific management could improve those numbers and provide a bonanza of salmon. This logic remains in current efforts; as the film points out, “protecting salmon has come to mean producing them.”²

The basis of the approach is to study and then artificially reproduce the salmon life cycles. But instead of increasing the survival of fish, these artificial efforts have largely failed. Among other things, the artificial process has decreased genetic diversity and left the fish less well-adapted to natural environments outside the hatchery (they become accustomed to coming to the surface for food in the hatchery, for example, but this behavior in the rivers results in being caught by hawks and eagles). However the real problem is not the naturally small proportion of fish fry that survive, but the multiple dams along their migration routes. These create large stretches of slow-moving water, which are killing more fish than ever. In undammed rivers the fry flow relatively effortlessly with the current, but without such a current they become exhausted. This has produced an absurd situation in which some fry are released, recaptured, and then transported by boat down the river!

In the end, the best results come from destroying the dams and letting the rivers and streams (many of which were straightened for aesthetic and managerial purposes) flow naturally. In fact, if the salmon are to be saved it appears the best option is to get rid of all the things humans have introduced to “help”, but actually impede them. To do this it is necessary to recognize, as the film concludes, that there is “much more to salmon than just making them.”³

Part 1: Against the Universal Claim of Scientific Method and the Paradigm of Making

Why is a 20th-century German philosopher relevant to dying salmon? Hans-Georg Gadamer is normally associated with hermeneutics, the study of interpreting texts. Interpreting texts may seem a distant concern from the challenges that face the salmon. However, what

¹ <http://www.pbs.org/wnet/nature/salmon-running-the-gauntlet-video-full-episode/6620/>

² Ibid.

³ Ibid.

Gadamer calls the paradigm of “making” is relevant to both.⁴ The paradigm of making sees both salmon and texts as objects to be made and manipulated, instead of partners in a dialogue. Salmon and texts are to be worked on, not worked with.

Gadamer argues the paradigm of making undermines many other modern projects—more specifically, for example, Gadamer thinks it has corrupted the understanding and practice of art, the “moral sciences” (the social sciences and humanities), and modern views of language. So while it is true that Gadamer is concerned with hermeneutics, this characterization obscures the breadth of his concern: at the heart of Gadamer’s philosophy is a critique of the “modern viewpoint based on making, producing and constructing.”⁵

We see this same approach in the example of scientific salmon management. If we can understand what is at stake in this modern paradigm of making, I suggest, we can perhaps see better alternatives. Furthermore, this means Gadamer’s masterwork *Truth and Method* can and should be fruitfully read as an environmental text (Currently, Gadamer is too rarely used in environmental philosophy and is included in none of the major readers in the field).

I will proceed by examining how this paradigm of making is at work in the social sciences, art and language. Since it is perhaps most obvious in language, I will begin there.

Language

There is a great difference between how language functions in everyday life and how it is used by modern, scientific approaches. In everyday use, language serves as a “common ground” that is “recognized by all, uniting all who talk to one another.”⁶ It functions largely without us being aware of it, and forms the horizons of our world. Different languages have different “linguistic shadings”—they open the world up in different ways.⁷ Gadamer wants us to recognize both that our language shapes our understanding of the world (indeed he would say our language is our world), and also that languages are open-ended. We can expand our own understanding through speaking with others from cultures and languages different from our own.⁸

According to Gadamer, modern science wants to escape the parochial limitations of a particular language in favor of a more “objective” one. In the case of language, science seeks to invent “systems of artificial communication.”⁹ Leibniz, for example, thought “only through mathematical symbolism would it be possible to rise entirely above the contingency of the historical language and the vagueness of their concepts.”¹⁰ He wanted to construct a new artificial language that would be universal.

This is the same approach taken with the salmon. A normally functioning process is viewed as inefficient and an attempt is made to remake and improve it. Gadamer argues that the

⁴ The phrase “paradigm of making” is my own. I use it for the sake of clarity and brevity as Gadamer uses a variety of phrases like the “modern viewpoint based on making, producing and constructing” (see next footnote).

⁵ Gadamer, *Truth and Method* (hereafter *TM*), xxxviii.

⁶ *TM*, 446.

⁷ *TM*, 448.

⁸ *TM*, 447.

⁹ *TM*, 446.

¹⁰ *TM*, 415.

point of so doing is to turn things into objects that are “absolutely available” to human use.¹¹ He argues that in the normal usage of language things are not entirely transparent to us. We do not understand all of the variables, the shades of potential meanings, and the unsaid in what we say. The attempt to create an artificial language seeks to make everything “intelligible” and thus available as a resource for human appropriation.¹²

For Gadamer this artificial approach is an “act of violence against language.” It replaces a living, breathing language with an ossified morass of technical terms. It is “impotent pedantry.”¹³ Against the intention of the creators of artificial languages, Gadamer thinks “knowledge acquired through these symbols is not clear and distinct” but “blind.”¹⁴

Proponents of artificial languages might respond that such languages do work for their purpose, and Gadamer might not entirely disagree with them. He thinks they *can* work, but only in a warped and distorting fashion. And that is why they are so dangerous. He proposes that such efforts might turn us into a “total technocracy.”¹⁵ I will return to this point later.

While Gadamer recognizes and worries this artificial approach *can* work, albeit in a reductive and distorting fashion, it often does not do even that. We have seen this with the salmon. As *Salmon: Running the Gauntlet* shows, efforts to artificially reproduce salmon have failed. In a society driven by the paradigm of making, however, the likely response to these failures to artificially remake salmon is to artificially remake salmon “better”. Instead of critically examining the paradigm at work, technocrats have redoubled their efforts to remake salmon. But Gadamer will claim there are good reasons to examine the paradigm of making itself, and this can be seen in what he calls the moral sciences (the social sciences and humanities).

The Moral Sciences

The natural sciences have succeeded magnificently in many ways, so it is not surprising that the moral sciences have attempted to imitate the scientific method. For Gadamer, however, this is a mistake. What makes scientific method so tempting is that it claims to be able to escape tradition and achieve a kind of objectivity. For Gadamer, this can be seen in Enlightenment thinkers who denigrated tradition as arbitrary and even malicious. These Enlightenment thinkers rejected the status quo and sought to remake society. Gadamer regards them as well-intentioned, but distrusts their method. He recognizes “the methodological spirit of science permeates everywhere” and contributes to “the growing rationalization of society and the scientific techniques of administering it.”¹⁶ But he does not think it can escape prejudice as it claims.

For Gadamer, the distinction between objective method and prejudiced tradition is naïve.¹⁷ It tends to paint tradition as monolithic and inflexible, when in truth tradition is multifarious and open-ended.¹⁸ It also ignores the universality of language. The scientific

¹¹ *TM*, 414.

¹² *TM*, 413.

¹³ *TM*, 415.

¹⁴ *TM*, 416.

¹⁵ *TM*, xxxvii.

¹⁶ *TM*, xxix.

¹⁷ *TM*, 270.

¹⁸ *TM*, 447.

method seeks, like one of its key modern advocates, Descartes, to start anew with no presuppositions, to advance forward with only that which is clear and distinct. Descartes can try and imagine some radically new beginning, but language, the medium of his imagination, never disappears. Language inevitably gives us certain prejudices. It shapes us in ways we cannot comprehend. If we could somehow truly become a blank slate, we would have nothing to say and would experience nothing. It is only through language that we are able to experience anything at all. To wish it away is to wish away the conditions for the possibility of understanding anything. We cannot push the reset button on language.

This means that no matter how much we try for objectivity, language will always have influence. Gadamer explores this further in an essay called “On the Scope and Function of Hermeneutical Reflection.” Here he points out that science claims to be able to avoid rhetoric through abstract mathematical calculation, but when it descends from those lofty heights it still has to communicate in a language that the rest of us can understand. Furthermore, it has to do so with rhetorical persuasion.¹⁹ Thus not only does science start from within prejudiced language, it has to finish with prejudiced language as well.

The solution, for Gadamer, is simple and limits scientific pretensions. We must recognize the positive and enabling character of language.²⁰ We must avoid seeing language and tradition as inflexible, monolithic, prejudicial frustrations and come to see them as open-ended and enabling sources of judgments. We must recognize these prejudices and take them into account in our studies, because to pretend they do not exist or that scientific methods can allow us to completely escape this conundrum will merely result in these prejudices working in the background. In short, it is easier to recognize and acknowledge bias than to try and abstract away from it through some set methodology. Gadamer calls an approach that recognizes the role of tradition and language “historically effected consciousness.”²¹

Stated in these terms, this may seem like a task that is only relevant to the social sciences and humanities, but the case of the salmon shows that it is relevant to “hard” sciences also. Salmon evolved in free-flowing rivers, but humans have dammed and straightened many of these rivers for practical and aesthetic purposes. Humans have sought to save the salmon, but without returning to the original conditions that salmon need to survive. Instead, through scientific ingenuity, we have tried to find ways to make salmon survive in inhospitable, but human-friendly, conditions (building fish ladders, mass producing fish, and so forth). *Salmon: Running the Gauntlet* argues this is out of touch with the salmon as complex animals and doesn’t harmonize with how they have evolved. Here both object (salmon) and the world of the object (the natural environment of the salmon) are being remade.

This brings us to the third example of the paradigm of making. We have now seen from the examples of language and the moral sciences that scientific method starts from a paradigm of making that rejects tradition and language in an attempt to artificially remake them. We can also learn from changes in the understanding of art since the rise of the scientific method.

¹⁹ Gadamer, *Philosophical Hermeneutics*, 24.

²⁰ *TM*, 269.

²¹ *TM*, 300.

Art

The broad claim Gadamer makes at the outset of *Truth and Method* is that we must explore “the experience of truth that transcends the domain of scientific method.”²² But the “dominance of modern science” means that the sort of questioning Gadamer wants to follow does “not appear legitimate.”²³ From the outset, science and the scientific method are taken for granted as *the* standard. Other means of accessing truth are mistaken as inferior and forced to give way to method. But, again, Gadamer thinks this is a great mistake. Not only does he think that there are other legitimate ways of learning truth besides the scientific method, he also thinks that other forms of knowing are better and “truer” in certain spheres.

He thinks this is especially clear with art, which is the reason Gadamer begins *Truth and Method* with art. “The experience of art,” he says, “is the most insistent admonition to scientific consciousness to acknowledge its own limits.”²⁴ On the one hand this seems fairly intuitive, since art often tends to get treated as the opposite of science, the subjective far pole from objective science. But Gadamer thinks when art is treated this way, as a subjective matter of individual preference, it has already been distorted. The true experience of a work of art is simply not a subjective experience and Gadamer suggests this common contemporary understanding of art is a result of the subjectivization of art carried out by Kant.

The contrast Gadamer wants to draw is between an alienated experience of art that separates the subject from the artwork and the experience of an “event” in which there is no such alienated separation between the subject and the artwork.²⁵ The former, he thinks, is a result of Kantian metaphysics, which radically separates the object from the subject. It leads to a kind of approach to art that is abstract and free of context—instead of experiencing a work of art from within a tradition with determinate meanings, it places the emphasis on the preferences of the subject.²⁶

For Gadamer, this subjectivistic approach to art is wholly inadequate. Despite its hold on popular understanding, it does not do justice to the experience of art. A more phenomenologically sensitive analysis reveals that when art is truly experienced in its fullness it is experienced as an event into which one is completely drawn. In such an event, there is no alienation of subject and object, but rather a unity in which the work of art functions as a kind of world revelation.²⁷

By contrasting the more phenomenologically accurate description of the experience of art with the common subjectivist understanding, Gadamer intends to show the ethical and epistemological implications of taking science as the primary or only way of knowing. Gadamer thinks this objectifying approach of science problematically and often unethically treats the thing studied as an object to be dominated. This warps the understanding of art and ethically compromises many efforts in the social sciences.

It has ethical and epistemological implications for the hard sciences too, as in the case of the salmon. While the researchers in *Salmon: Running the Gauntlet* are clearly interested in the survival of the salmon as a species, the salmon are still treated as an object to be controlled,

²² *TM*, xxii.

²³ *TM*, xxi.

²⁴ *TM*, xxiii.

²⁵ *TM*, 97.

²⁶ *TM*, 85.

²⁷ *TM*, 99.

directed and remade. Just as seeing a person as an abstract object misses what it is to be human, so too, treating the salmon as an object obscures the salmon.

On the epistemological level, Gadamer suggests an approach that is more like a conversation (which requires listening and back-and-forth) than a subject that observes an object. As odd as it sounds in a tradition now accustomed to the subject position of humans and the object positions of non-humans, we should talk to and listen to the salmon.

Gadamer's Critique of Science

Gadamer's critique of science and its application to the salmon is relevant to broader environmental studies. We have seen that Gadamer is concerned about the abstraction, rejection of tradition, and alienation implicit in scientific practice. We have also seen that these are components of the paradigm of making. Gadamer is quite clear on what is at stake: "Modern theory is a tool of construction by means of which we gather experiences together in a unified way and make it possible to dominate them."²⁸

Against the paradigm of making that aims at domination, Gadamer wants to promote a paradigm of conversation that preserves the "dignity of the thing" and language.²⁹ But to fully understand this critique of the paradigm of making requires understanding how the paradigm relies on a "deficient mode of being."³⁰

Gadamer's argument draws on the distinction made by Heidegger in *Being and Time* between the present-at-hand and the ready-to-hand. Heidegger famously uses the example of hammering to describe these two different modes of being. His phenomenological descriptions aim to examine the difference between the normal activity of hammering and how it is interrupted if the hammer were to break. In the normal activity of hammering, Heidegger says the hammer disappears in the sense that we use it without thinking about it. It is like an extension of the arm. Humans go about everyday tasks naturally and without articulating why. Heidegger calls this mode of being "readiness-to-hand."³¹ But if the hammer were to break, the smooth functioning of action would be interrupted, causing a switch to a different mode of being that is detached from the activity and the thing being used. It necessarily creates a more distant stance. Heidegger calls this mode of being "presence-at-hand."³² Importantly, Heidegger argues that the mode of being of "presence-at-hand" is derivative from the mode of being of "readiness-to-hand." The mode of being of "presence-at-hand" only occurs in the breakdown of normal ways of interacting with others and things in the mode of being of "readiness-to-hand."

Gadamer agrees with Heidegger that both Greek theory and modern science have privileged "presence-at-hand" to the degree that they ignored or even forgot "readiness-to-hand." *Truth and Method* could be fruitfully read as an elaboration and exploration of Heidegger's initial criticism of the modern Cartesian mistake in privileging an abstract, alienating mode of being. In agreement, Gadamer claims the "experimental sciences" cannot be followed with the problematic "prejudice originating in the ontology of the present-at-hand as well as in the

²⁸ *TM*, 454.

²⁹ *TM*, 456.

³⁰ *TM*, 455.

³¹ Heidegger, *Being and Time*, 98.

³² *Ibid.*, 129.

concept of objectivity.”³³ As we have seen in the case of the salmon, to treat a thing in an abstract, alienated, and tradition-rejecting fashion can lead to distortions in how it is understood. It changes the thing from something to learn from and to work with into something to remake and to manipulate. It treats the thing not as a partner in a conversation, but as an object of interrogation that needs to be refashioned according to human need.

And as Gadamer predicted, the results can be disastrous not only when it fails, but also when it succeeds. Gadamer explores how the hegemonic paradigm of making can disastrously affect humans and the environment in an essay entitled “Theory, Technology, Praxis.” He says: “Today...the technical exploitation of natural resources and the artificial transformation of our environment has become so carefully planned and extensive that its consequences endanger the natural cycle of things and bring about irreversible developments on a large scale.”³⁴ It doesn’t help that this process goes unhindered and unquestioned because of a “superstitious faith in science which strengthens the technocratic unscrupulousness with which technical know-how spreads without restraint.” Gadamer worries this will lead us to a “totalization of technical civilization.”³⁵

As we can see in these passages, the threat has two parts: first, the paradigm of making itself and, second, the ways that this paradigm becomes so entrenched and natural that it becomes difficult to question, critique, or slow it. Totalized, technical civilization threatens to become an autonomous, thoughtless, ongoing process of remaking.

Here we find that the logic that placed humans as subjects over objects like salmon and the environment has, in the end, subsumed humans also. For example, writing about changes to the field of medicine, Gadamer argues that medical workers traditionally developed practical skills and practical intelligence that allowed them to have their own judgment and autonomy. But technocratic society makes this difficult because “its increasing specialization [has] led to a deluge of information which turns against itself.”³⁶ Practical skills and practical rationality become subsumed in technical bureaucratic rules that attempt to organize the flood of ever-increasing information.³⁷ Doctors and nurses are asked to use routinized procedures to streamline, normalize and regulate the field. In the end the paradigm of making leaves both humans and the environment without dignity, as mere objects to be remade and manipulated.

Part 2: Developing an Environmental Hermeneutic

Considering his standing as the leading figure of modern hermeneutics, it might be expected that Gadamer would only be relevant to literature. But as we have seen, his concerns about the growth and spread of the modern technocratic paradigm of making, the warped understanding of and relationship to language, the moral sciences, and art it engenders, and the radical changes it has brought in how we relate to the natural world and other humans have a wide application. Thus, while he is often writing about literature, art or medical practices, these efforts are attempting to articulate and critique a modern paradigm of making that drives a great

³³ *TM*, 456.

³⁴ Gadamer, Hans Georg. “Theory, Technology, Praxis,” 7.

³⁵ *Ibid.*, 7.

³⁶ *Ibid.*, 8.

³⁷ *Ibid.*, 17.

deal of the technocratic managerial attitude towards nature. In this sense Gadamer can be read as an important environmental voice.

Environmental Hermeneutics: Talking to Fish

So what alternatives are there to this paradigm? How can Western scientists and observers turn away from treating fish as objects to be made and remade and towards treating them as partners in an ongoing dialogue? It is important to note that Gadamer is a Western thinker writing to a Western audience that he thinks is so immersed in the paradigm of making that it appears natural to them and tends to go largely unquestioned. In fact there are other cultures that do not share this paradigm and some of these cultures regularly communicate with fish and non-human life in a much more dialogical fashion. Not surprisingly, these cultures—Native American cultures in particular—have been exciting to Western environmentalist thinkers seeking to reconsider and change Western relationships with nonhuman life.

Native American thinkers like Vine Deloria, Jr. and Daniel Wildcat portray Native American cultures as sharing ontological assumptions about animals and plants that treat them as the older siblings of humans, as family rather than resources.³⁸ As older siblings, they merit close observation and respect.³⁹ Of course if non-human life is treated as family, this implies the necessity of radically different ethical relations to the natural world. From the perspective of an environmentalist looking to overcome the technocratic paradigm of making, non-Western cultures may be an important resource—something to turn to and learn from.⁴⁰ David Abram, for example, begins his environmental work *The Spell of the Sensuous* with a story of his awakening to the natural world in Indonesia.⁴¹

Critics have pointed out that this can lead to a kind of raiding of non-Western traditions in a frantic search for alternatives.⁴² These other cultures, somewhat ironically, may find themselves being treated as resources at the disposal of desperate Western thinkers. These criticisms raise important questions about the relationships between environmentalist thinkers and non-Western cultures, but I do not think they should preclude genuine, respectful learning. Vine Deloria, Jr and Daniel Wildcat may not appreciate being used as resources for environmentally-minded academics to improve their CVs, but it is clear they would like to see the Western tradition change how it relates to nature.

What exactly the effort to dialogue and interact ethically with the non-human world entails, then, depends on the cultural background of those involved. For a Western thinker acculturated into the paradigm of making it involves two parts: the first, which has been the primary focus of this paper, is (1) articulating, criticizing and disrupting the paradigm of making. Only when we are appropriately vigilant about the paradigm of making can we begin to engage in the second part, (2) dialoguing with the world in a hermeneutically sensitive way.

How can we resist the technocratic paradigm of making when it is now so pervasive and “natural” among Western thinkers? I will attempt to give a preliminary indication of what it

³⁸ Vine Deloria, Jr., and Daniel Wildcat. *Power and Place*.

³⁹ Ibid.

⁴⁰ Devall, “The Deep Ecology Movement.”

⁴¹ Abram, David. *The Spell of the Sensuous*. (New York, NY: Vintage Books, 1997).

⁴² Sturgeon, “Naturalizing Race.

might look like. The first thing to point out of course is that this question itself risks being reinscribed back into the logic of making: Not working? How can we *make* it work better? The paradigm of making can impede even asking the correct questions or following through with the ramifications of a dialogical approach. The scientists in the film *Salmon: Running the Gauntlet*, for example, are shown as highly knowledgeable experts about salmon. The problem is not that they do not understand the need of salmon fry for undammed river with adequate water flow, but that the paradigm of making convinces them they can circumvent these needs: making more salmon, picking up the fry and transporting them in boats when needed, etc. These scientists interact with fish. They know what they need. And yet they tend to treat them as fungible objects to be remade in ways that are convenient for humans.

This sort of problem has led some environmentalists to seek to abandon the “cycle of making” itself and cease the never-ending attempts to fix what we disturbed in our last attempt to fix.⁴³ Others have focused on the question of speed and called for the need to go slower.⁴⁴ A slower, more thoughtful approach does seem to fit with Gadamer’s hermeneutics and certainly he wants to question the endless “cycle of making.” What he does not want to do is introduce hermeneutics as a new method in itself. The title *Truth and Method* is meant to draw attention to truths, like the truths of art, that go beyond scientific and other forms of method. *Since method can close us off to certain forms of knowing and truth, Gadamer is not seeking a new one.* He recognizes that many different forms of study and practices may be relevant depending on a variety of factors. As such, instead of setting up a new method, Gadamer approaches the issue at the level of rationalities and contrasts practical and political rationality from technical and/or scientific rationality. As we will see, this is meant to allow for many different ways of dialoging with our world.

Richard Bernstein correctly presents a key passage from Gadamer that both illustrates the problem and indicates the direction of Gadamer’s solution:

In my own eyes, the great merit of Aristotle was that he anticipated the impasse of our scientific culture by his description of the structure of practical reason as distinct from theoretical knowledge and technical skill...The problem of our society is that the longing of the citizenry for orientation and normative patterns invests the expert with an exaggerated authority. Modern society expects him to provide a substitute for past moral and political orientations.⁴⁵

But, Gadamer thinks, in our modern technocracy there is very little space for non-technical rationality. The result is more technical manipulation—more of the endless cycle of making. Gadamer continues:

I think, then, that the chief task of philosophy is to justify this way of reason [the non-technical practical reason] and to defend practical and political reason against the domination of technology based on science. This is the point of philosophical hermeneutic. It corrects the peculiar falsehood of modern consciousness: the idolatry of scientific method and the anonymous authority sciences and it

⁴³ Mathews, “Letting the World Grow Old.”

⁴⁴ Honore, *In Praise of Slowness*.

⁴⁵ Quoted in Bernstein, *Beyond Objectivism and Relativism*, 39.

vindicates again the noblest task of the citizen—decision making according to one’s own responsibility—instead of conceding that task to the expert. In that respect, hermeneutic philosophy is the heir of the older tradition of practical philosophy.⁴⁶

Where does this leave us? Near the end of the text, Gadamer clarifies what he has been doing:

Our starting point is that verbally constituted experience of the world expresses not what is present-at-hand, that which is calculated or measured, but what exists, what man recognizes as existent and significant. The process of understanding practiced in the moral sciences can recognize itself in this—and not in the methodological ideal of rational construction that dominates modern mathematically based natural science.⁴⁷

Gadamer is arguing that we need to turn away from our idolization of scientific method towards approaches that can recognize tradition and avoid both alienation and excessive abstraction. This is not to say science should be avoided, but that we should recognize its limits. Often the place to begin is not in the “present-at-hand” of interrupted life, but in the “ready-to-hand” of lived life and this will require sensitivity to what approach fits best relative to the particular context we are studying. Most importantly, we need to be very cautious about the paradigm of making, which ultimately seeks to dominate things.

If we are sufficiently vigilant about the critical task of resisting the paradigm of making, we can attempt the kind of hermeneutical dialogue that Gadamer encourages. There is no single method for this. Indeed, the history of environmental thought, environmental philosophy, and different movements like ecocriticism, deep ecology, ecofeminism, etc. provide an important record of successes and failures to dialogue with the non-human world and offer many different suggestions for how to do so.⁴⁸ The appropriate approach may vary greatly depending on context. Briefly, with regard to salmon and fish, I want to offer a few examples of what this might look like.

(1) As we have already seen, some cultures have traditions in which they dialogue with non-human creatures regularly. Not surprisingly, environmental thinkers have often turned to these traditions in an effort to learn what this entails. Sometimes this sort of approach is anthropological. Sometimes, as in the case of Vine Deloria, Jr and Daniel Wildcat, it is a matter of listening and learning from those who belong to such cultures. I will not go over this in detail here, as it would be better for those who are interested to look to these writers themselves.⁴⁹

We can also attempt to step away from the paradigm of making by (2) engaging in practices that encourage us to develop mastery and practical judgement and also through (3) art.

(2) As mentioned earlier with regard to medical practice, Gadamer thinks that previous to recent hyper-specialization and bureaucratization, doctors and nurses relied on the skills of

⁴⁶ Ibid, 40.

⁴⁷ *TM*, 456.

⁴⁸ These are rich and complex traditions, each of which has its own reader available. A general introduction can be found in something like: Zimmerman, et al. *Environmental Philosophy*.

⁴⁹ Deloria Jr. and Wildcat offer many recommendations for further reading in *Power and Place*.

practical judgement that develop over time and in specific settings. This sort of practical judgment or practical rationality has been elaborated and theorized both in general and specific settings by thinkers like Pierre Bourdieu, Hubert Dreyfus and his students—like Patricia Benner, who has done so with regard to nursing practices (in a way, I think, that would be approved by Gadamer).⁵⁰

This topic has also been wonderfully illustrated in the recent film *Being in the World* by Tao Rusopoli, which shows masters of particular crafts at work in their media. The film shows how, for example, a master guitarist experiences his or her guitar not as an object to be mastered, but as a partner in the mutual, joyous act of playing music. This is a completely different way of relating to a thing than the paradigm of making. A master carpenter, as another example, knows each type of wood, how to read the grains of the wood, how each wood responds to the touch and actions of the carpenter, etc. In such a setting, it may seem not so strange to speak of the carpenter conversing with the wood or the guitarist being one with the guitar. The objective gaze of science, on the other hand, does not access the world in this fashion. Gadamer calls this difference the deficit mode of being of scientific study.⁵¹ Helping the salmon may require multiple ways of interacting: dancing, conversing with and loving them in a way that is common for master practitioners. However these approaches are often dismissed in the paradigm of making as not systematic or scientific enough. If we want to observe and learn from such practices, we should approach individuals who have obtained such mastery—in the case of salmon and other fish, fishermen.

(3) Finally, we may dialogue with salmon through art. While poetry is a useful medium for this kind of approach,⁵² film, in particular, is promising. Since it is not the purpose of *Salmon: Running the Gauntlet* to engage in the positive task of talking with fish, but rather to critique the paradigm of making that prevents or destroys such conversation, it does not serve as a good example of this. A better example is another PBS documentary entitled *The Mystery of Eels*.

The Mystery of Eels presents the journey of writer James Prosek to understand eels. What makes it a good example of dialoguing with eels instead of studying (and objectifying) them is that Prosek takes an almost reverential approach. The film describes itself as exploring the “mysterious world of the eel.”⁵³ Prosek begins with his childhood experience of finding eels in streams and being fascinated with them. The film then moves through various perspectives on eels: eel farmers in the northeastern US, Japanese scientists and sushi consumers in Japan, efforts to revitalize the eels in New Zealand where they are revered by the Maori, and Prosek’s own personal art, done with and about eels. The tone of the film is one of wonder, curiosity and fascination. As a result, the eels come across not as objects to be made and remade (even though this might be the desire of eel farmers or sushi restaurateurs), but as somewhat distant interlocutors that we never fully understand. Prosek respects the eels and talks with and about them throughout the film in a way that preserves their autonomy and integrity. They are too special and too fascinating to be treated as a fungible consumer good. As a result of the careful sensibilities Prosek brings to the film, it serves as a good example of how to dialogue with fish in

⁵⁰ Benner and Wrubel, *The Primacy of Caring*.

⁵¹ See the section on Gadamer’s critique of science above.

⁵² Roche, “Salmon Suite,” 93-97. Another interesting approach that combines non-Western thought with poetry is Gloria Anzaldúa’s explorations of “mestiza consciousness” and her poetry. See Anzaldúa, *Borderlands/La Frontera*.

⁵³ <http://www.pbs.org/wnet/nature/the-mystery-of-eels-video-full-episode/8251/>. Accessed 2017.

a way that resists the technocratic paradigm of making and serves as a good example of an environmental hermeneutic.

Learning from traditions that have resisted or fall outside of the paradigm of making, mastery and practical judgment that arise from experience, and art like poetry and film are all different ways of relating to fish. If done well they can each bring us into a better relation with the fish and the natural world they inhabit; one that resists seeing them as a fungible object to be made and remade.

Conclusions

The example of the salmon is a stunning and frustrating example of the flaws in the paradigm of making. There are many more examples, especially in the social sciences. Anthropologist James C. Scott has documented similar situations with human cultures in *Seeing Like a State*.⁵⁴ He and other social thinkers like Bent Flyvberg have also argued, in agreement with Gadamer and Dreyfus, in favor of an alternative practical rationality.⁵⁵

The literature on practical rationality in this sense is lengthy. It traces its original articulation to Aristotle's *phronesis* and then shows how the Western philosophical tradition has often completely forgotten this fundamental aspect of human existence and its implications.⁵⁶ For Gadamer, it is some version of *phronesis* or practical judgment that offers an approach that is broader than the scientific method and that Gadamer hopes will preserve the dignity of things and promote a paradigm of conversation instead of a paradigm of making aimed at domination. James Risser calls it "the key to the entire project."⁵⁷

My purpose in this paper however is not to articulate Gadamer's theory of practical rationality (in which he distinguishes different types), but to focus on the problematic paradigm of making. The problems caused by the paradigm of making point to the necessity of reexamining the pretensions of science and the importance of practical rationality. If I am correct that the attempt to artificially produce salmon is a particularly poignant example of the paradigm of making that Gadamer seeks to analyze in *Truth and Method*, then perhaps seeking a more dialogical approach would help the salmon, as well as the humans who rely on them. Reading Gadamer this way shines light on the problems that pervade our attempts to improve the world around us. With this in mind, Gadamer should be treated not only as a thinker of hermeneutics, but also as a thinker of environmentalism.

⁵⁴ Scott, *Seeing Like a State*.

⁵⁵ Flyvberg, Bent, *Making the Social Sciences Matter*.

⁵⁶ A good introduction to this is: Dunne, *Back to the Rough Ground*.

⁵⁷ Risser, *Hermeneutics and the Voice of the Other*, 2.

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