

Rethinking Technology II:  
Nature, Structure and Performance

Thomas Ewens

(Presentation prepared for First International Workshop on the Theory of Mediation, Salve Regina University, Newport, RI, August 2001)

In the first lecture this morning, we reflected on the nature of science, the importance of the point of view in establishing the object of the science, the similarities and the differences between the sciences of nature and the sciences of the human and the role of pathology in grounding distinctions among the latter, the idea of human rationality/culture as one yet as refracted into four autonomous, analogous modes, and the fact that these modes of rationality, mixed up together in the concretude of human activity, can and must be distinguished theoretically and, when they are, can be seen to be systematically inter-related, depending upon which mode of rationality is at issue, in terms of form and content, or infrastructure and structures incidental to it. How's that for a one sentence resume?

In this lecture, I want to complete a brief overview of the theory of mediation by situating it briefly with regard to its history, in particular the history of structuralism, and by explaining the dialectic of nature, structure and performance that is constitutive of those mediations we call signs, tools, persons, and norms. This will take most of our time. I also want to explain the aims of reason as envisaged by the theory of mediation and, if time permits, to clarify, in terms of those aims, the meaning of art/technology by contrasting it with the meaning of the aesthetic as this is understood in the theory of mediation.

This is an enormous amount of material to attempt to cover in a single general lecture. It is not the introductory course in Western Civilization, but almost! As in the first lecture, my focus will be more on the theory of mediation than on technology though, wherever possible, I will use the latter to illustrate the former.

Let me begin by asking you to summon up some images and to hold them firmly in your minds. I once read that a Ph. D. knows something like 50,000 words -- or was it 25,000? In any case, a lot of them. How many do each of you know? 40,000? 30,000? 10,000? A few of them -- perhaps a couple of hundred -- you use all the time (At RISD students only use only three all the time: 'like', and 'you know'); most of them are unused most of the time. But they are there, available, in your memory, and, if your memory fails, they are artificially preserved in the social repositories of words we call dictionaries. Though unspoken, and for the most part not even thought about, they are there, ready to be said, a prodigiously powerful resource available to you as English-speakers, a real capacity to speak, an 'able-to-say', that you can at any time summon forth and actualize in your speaking performances.

In similar fashion, an artist (rather than a Ph. D.: Ph. D.'s are primarily concerned with knowing, artists with making -- though of course artists know many things and Ph.D.'s can make many things) can use -- how many tools? 25,000? 10,000? 3000? In any case, a lot of them. Some of them -- chairs, tables, floors, wall, pencils, screwdrivers, cars, fork, knives -- you use all the time; others are seldom used. Maine boat builders have hundreds of tools hanging on the walls of their boat sheds. A really good hardware store has many more. Unused, and mostly unthought about, tools,

like words, are also there, ready to be used, a prodigious arsenal of technological prowess available to you as American artisans, a capacity to make, an 'able-to-use-or-to-make', that you can draw upon at any time and actualize in your conscious performance of making.

We could summon up similar images of the myriad, complex, historical and social agreements that bind us, many of them going back hundreds of years, often long forgotten yet still present in our daily lives. Agreements and compacts that are our capacities to act socially and historically as early twenty-first century American and European intellectuals speaking English and French and German, sharing common modes of dress, laws of scholarly exchange, and so on. And, finally, we could summon up the equally numerous and equally complex array of normative valuations (personal, national, international, moral, political, aesthetic, etc.) that are as much a part of the human environment as words and tools: they too are there, some of them enacted all the time, others in the background, all of them there as abiding capacities, abilities-to- be and abilities-to-decide, that we can enact at any time in our contracts and our decisions. But let us stay with words and tools.

Notice, if you will, three things about this stock of words and tools.

First, they are all composed of natural materials: the words of sounds of various sorts (or their written transcriptions into paper and ink or, if they are 'recorded' electronically, into certain kinds of magnetic codings, electrical impulses, etc.); the tools of wood and iron and aluminum and tungsten and stone and diamonds, etc..

Secondly, none of these natural materials, insofar as they have become

words or tools, is now the way it was “in nature”. These natural materials are rather transformed and have now become, in the case of the sounds, signifiers coupled to signifieds; and, in the case of the natural material elements, fabricators coupled to fabrications. Moreover, the signifiers and the signifieds, the fabricators and the fabrications, are themselves organized in extraordinarily complex ways: in the case of words, into the structures of signification that underlie our use of words; in the case of tools, into the structures of fabrication that underlie our use of tools. All of this immense effort of rationalization, that is, the effort of rationally structuring and ordering the sounds of speech and the material elements of tools together with their meanings, is already there “in” the words and tools. It is precisely because signs and tools are already structured in signifying orders and fabricating orders that they are ready-and-able-to-be-spoken, ready-and-able-to-be-utilized.

Thirdly, we are now in fact using a small number of these words and these tools. As speakers and listeners you and I are both using the words whereby we signify the meanings that we are speaking and hearing and sharing in as, if you will, co-locutors; and as collaborators, we are all now in fact using some common tools, like this floor, these walls, this microphone, this blackboard, these pieces of clothing, these pens and pencils whereby we technicize the meanings (the built environment) that we use. And notice: the words (signs) and tools only fully exist as signs and tools when they are in fact being realized as such. Until we use them, they only exist ‘in potency’ as the scholastics used to say, that is, as capacities to speak, capacities to work. In our performances we actualize these capacities and bring them to bear on the particularities of the situation at hand, the speech situation or, as it may be, the work situation. And in so doing we transform them.

So we have considered this stock of words and tools from three points of view: nature, structure, performance. These are the three moments of the dialectic that is involved in all human activities, whether of speaking, or making, or instituting, or regulating. I want to show now, briefly and schematically, how the theory of mediation understands this dialectic. But before doing this I want to open a brief historical digression so that you might better situate how the theory of mediation treats these matters in the context of other contemporary theories. My intention here is not to discuss these theories in any detail, of course; it is rather to evoke some recent intellectual history that, I trust, is already in some sense familiar to you. As you know, there is a very large literature on this subject.

Among the movements or schools that have dominated contemporary intellectual life, particularly in the human sciences, during the period stretching from the end of WW II until well into the 1980's, none perhaps is more prominent than the movement that stems from the work of De Saussure and has come to be known as structuralism. From De Saussure to Troubetskoy to Jakobson to Levi-Strauss to Lacan to Barthes to Foucault to Althusser to Derrida -- to mention only the most prominent names -- some variant of 'structuralism' has permeated fields as diverse as literary criticism, ethnology, anthropology, sociology, linguistics, psychoanalysis, philosophy, theology. This is an exceptionally rich and complex historical and theoretical domain and I will not try to retrace any of it here.

However, I would make several points with respect to the relation between this current of thought and the work of Jean Gagnepain. Gagnepain grew up in a France that had newly discovered De Saussure and that was decisively influenced by the work of early structuralists, especially Levi-Strauss and Lacan. Like Levi-Strauss, Gagnepain recognizes De Saussure, Freud, and

Marx as the principal predecessors of his own work. Like Levi-Straus and Lacan, he recognizes that there is a dialectical relation between nature and culture (though what people mean by 'nature', 'culture', and 'dialectic' varies widely). Like them he recognizes that the structural element in human thought lies under the phenomena, is not directly available to conscious thought, but is, rather, as Freud put it, unconscious. At the same time, although he learned from and draws upon these authors, Gagnepain conceives the relations between nature and culture quite differently than they do.

Many, for example, present the relations between nature and culture not only as conflictual but as mutually exclusive. What is intelligible for such theorists is not nature but nature subsumed in structure. Thus, for example, will Levi-Strauss claim that the laws against incest and the consequent exchanges of women replace the natural promiscuity of the jungle; thus will Lacan say that natural drives and pulsions only exist in chains of signifiers, acculturated by language. In short, structures of kinship or of signification are seen as other than and dialectically in conflict with nature in such a way that the status of nature within different strains of structuralism becomes highly ambiguous.

More importantly, there is an unresolved tension in much structuralist thought between the structures that these thinkers take as the object of their 'science' and the performances that these structures undergird and enable. In De Saussure's terms, these thinkers tend to emphasize, as DeSaussure himself did, the structural elements of *la langue* (language as structure) and they tend to neglect -- when they do not simply ignore -- the performative aspects of *la parole* (language as speech). By a variety of routes, this has led to what is sometimes called 'the death of the subject'. What counts, for many structuralists, is no longer the conscious subject

somehow and to some degree master/mistress of his or her acts but the structural system in which the subject is dissolved in an endless play of relational unities which are defined only by what they are not. Thus, for example, does Lacan speak of the incessant slide of the subject underneath the play of the signifiers; or Levi-Strauss of the unconscious as an empty space, a purely symbolic function. In particular has this 'subversion' or 'elision' of the subject been a constant area of controversy between structuralists on the one hand, existentialists, phenomenologists, and hermeneutical philosophers on the other.

Gagnepain claims to have overcome this shortcoming of structuralism and to have overcome, as well, the tendency of some structuralist thought to subsume nature into structure. The theory of mediation attempts to explain a) what is proper to the animal nature in which human beings continue to participate; b) the rational structurations of this animal nature; c) the performances which draw upon, even as they transform, these structurations. In a word, the theory of mediation combines in a conflictual and dialectical tension the three elements we pointed to above: nature, structure, and performance. In any human performance all three are always involved even though it is only the conscious performances that are directly available to us. But what undergirds these performances is both an animal nature in which we continue to participate and an always already rationalized and structured nature, that is to say, a nature that has been transformed into highly structured capacities to speak, capacities to work/make things, capacities to enact oneself as a social and historical being, capacities to regulate one's desires.

This aspect of the theory -- which is called the principle of praxis or principle incorporated rationality -- is the most difficult to explain in a

succinct way and the most difficult to fully grasp but I need to address it at least briefly to do justice to the theory and to lay an adequate groundwork for our later discussions. So bear with me!

Here is a clue: the rationality that we discover in human cultural phenomena is our own rationality; it has been put in the phenomena not by God or by nature but by us; and it has been put there before any of us thought to try to study it. How was it put there? It was put there by our human rationality itself operating, so to speak, in us without us, or, if you prefer, operating in us 'unconsciously' or, more simply, 'implicitly'. It is part and parcel of human praxis. Merleau-Ponty thought that this notion of "an enlarged reason" is perhaps the great discovery of the last one hundred plus years, common, in different ways, to De Saussure (structure), to Marx (historical praxis), and to Freud (unconscious). The natural basis of our activities and the structurations of that natural basis are presupposed in all of our performances; indeed, they are already there before we actually speak, or make things with our tools, or enter into agreements, or regulate our desires by authorizing some actions or sentiments or policy choices as right and others as wrong.

Consider the images with which we began. All those words and the grammatical structures they presuppose, all those tools and the technical structures they presuppose, in short, all of that structurally organized natural material is already there before we actualize the signs in speaking or the tools in constructing, and it is only in the actualizations of our performances that the signs and the tools fully exist as signs and as tools. Without our performances, all those rationally ordered structures of signification and rationally ordered structures of technicization would only exist as capacities-to-speak, capacities-to-make. Claro?



Let me explain this further.

The fact that the theory of mediation deconstructs human rationality into four modes does not mean that this quadripartition is itself necessarily cultural. On the contrary, it is natural and is shared with the animals. For if it is true that human beings alone are capable of language in the true sense, any dog or cat or mouse is capable of perception and representation. The dog represents the sight and the smell and the sound of the cat, the cat the sight, smell, and sound of the mouse, and so on. (Gnosia) Similarly on the other planes. Animals do not use tools in the true sense, but they do engage in habitual, constructive activities, e.g. beavers building dams, birds building nests, etc. (Praxia) Animals do not live in history or society in the true sense but they do maintain and reproduce their bodies within their species and when they live in herds, coveys, prides, packs, as many of them do, they do accede to a kind of gregariousness. (Somasia) Animals do not emerge into the ethical sphere in the true sense but they do experience drives, pulsions and repulsions, and they are able to contain or defer them. (Boulia) So that, although animals do not accede to grammar and thus to speech, technics and thus to tool-using, ethnics and thus to society and history, ethics and thus normative behavior, they are nonetheless capable of animal gnosis, praxia, somasia, boulia.

Moreover, animals are also naturally capable of establishing non-immediate relations with items of their environment.

My dog comes to me when he hears my cry "Come!", my horse changes leads when he feels my kick in the side, the crows sense danger when they hear caw-caw-caw. Animals can in that way link two objects, one index, the other

sense, in symbolic activity, and this symbolic representation on the level of animal gnosis has its counterparts on the other levels.

The ape can use the stick to get the banana, the bird puts together the string and the twigs, the beaver weaves the saplings into a lodge. In other words, the animal can link two projects, one the means, the other the end, in an instrumental activity.

On the level of animal somasia, animals can maintain and reproduce themselves by linking two subjects, one the specimen (an individual, an item, or a part representative of a class, genus, or whole), the other the type (a taxonomic group, especially a genus or species), in species-specific behavior. In other words, cats do it with cats, elephants with elephants.

Finally, animals can “consent” to the fatigue of the hunt or the wait for a sexual partner and put off the immediate satisfaction of a drive. They can, that is, link two projects, one price, the other good, in valuing behavior.

We, of course, can do the same, and in us the content of our actions can be either natural or cultural. The fox can pay the price of running fast to catch the rabbit, and so can a man; but the man, unlike the fox, can also pay ten dollars for a rabbit stew. The mechanisms are the same but in the second case the content is cultural rather than natural as it is in the first case.

But now the plot thickens.

Human reason contests the animality/animal condition in which nonetheless it never ceases to participate. Gnosis, praxis, somasia, boulia, symbolic representation, instrumental activity, species-specific maintenance and

reproduction, valuing behavior -- all of that we share in common with the animals. It is something else which is proper to humans and which intervenes identically on each of the four levels in the way we "humanize", "cultivate", "acculturate" our natures. The theory of mediation calls this something else the "agency" of reason which, in different modes depending upon whether it is a question of saying, or making, or being, or willing, rationally contests or negates our animality, and structures it.

The cognitive consciousness we have of the world does not coincide with the animal representations we have of it. (This way of speaking is not, strictly speaking, exact, since even our natural perceptions and representations are not 'pure' or 'purely natural' but are more or less penetrated by language and bear its imprint). In animals there is always a perfect fit between the index and the sense. In us, there is not: for example, we have many words to say one thing, or can say many things with one word. None of our words ever fit exactly, which is why we revise and revise and revise.

More generally, our concepts are abstract and universal, not singular and concrete like our perceptions and representations. In other words, the agency of reason contradicts the natural representations we share with the animal world and introduces a lack of fit, or impropriety, which characterizes language as other than any merely natural reality. This contradiction, or negativity, or lack of fit -- this impropriety (Merleau-Ponty spoke of it as "non-senses") -- prevents the word from coinciding with the thing-to-be-said. All of our words are, to begin with, improper. Later, on the level of performance, we will constantly struggle to find "proper words for proper places" but on the level of grammar all words are first improper, do not fit. (Though he wrongly understands it, this is what accounts for what Lacan calls metaphor and metonymy -- and all the other figures of speech.) The

problem of performative speech, rhetoric, is to take these words of the lexicon and these general rules of grammar which are improper and do not fit and try to make them fit the speech situation. This is the reason for our constant recourse to figures of speech of all sorts: once again, none of our words exactly fit the reality-to-be-said. This is also the frustration that fuels the recurrent dreams of a perfect language.

Similarly, ergologically, tooled conduct does not coincide with natural, instrumental activity. The animal fashions things -- nests, beaver dams, burrows -- with its natural organs whereas human beings fabricate with tools which they have themselves fabricated. The tools contradict the natural gestures of the animal and transform them: we turn the screw to make it go straight, for instance, or we make the bike go forward by turning the wheels around, or we lift the load up by pulling the pulley rope down. Our activities are not tied to natural necessities and they are much more economical than the busy-work of the animals. It is a lot easier to dig with a shovel than with our hands; a lot easier to sit comfortably while the car or plane moves us than to walk. The tool prevents technique from coinciding with the trajectory. It introduces a leisure from the labor of the animal world, a freedom from its all-consuming busyness, a dispensation or release from the necessities of natural activities. Tools are time-savers, energy-savers, storehouses of leisure. Think of the differences between a rickshaw and a bike; between the Mayan human pack animals and wheeled vehicles.

On the plane of being, our social and historical conditions do not coincide with our natural states. Here the agency of reason contradicts our natural conditions and introduces "cuts" and "separations" which are not there naturally. In the animal world the only separations are those of individual bodies that are biologically independent of one another. Culturally, the

person introduces “cuts”, “separations”, “fractures”, “breaks” of all sorts: of classes, generations, regions, nations, professions, religions, artistic styles. We form small groups and break off from the main group in factions, sects, rival camps; and at the same time, one person belongs to many different groups and it is not only politics that makes strange bedfellows.

What is true socially in space is also true historically in time. Naturally we are only present with those who are immediately present to us. Strictly speaking, as Gagnepain likes to say, only animals have contemporaries. But culturally we exclude from our historical group people who are in fact biologically present, e.g., immigrants, foreign visitors, and we include people who are physically absent, either dead, like Washington and Adams and Lincoln, or far off: you, an American, can live in Timbuctoo but you can vote *in absentia*, while others, who are not Americans but live in America, cannot vote *in praesentia*.

The person negates the natural subject and prevents the coincidence of animal gregariousness and human society, of biological life and human history. In contesting the natural presence of the animal subject, the person introduces absence; in positing or instituting ethnic divergences of all sorts, the person introduces arbitrariness into the regularities of nature.

Finally, human ethical behavior does not coincide with the natural regulations of animal instincts and drives. In the animal world of biologically determined desires, the agency of reason introduces an abstinence, a not-willing, an insistence that another order of goods be determinative of human desire, an order that human reason authorizes, that is, a rational standard or norm of what is right and proper for human beings and what is not. Here the norm prevents ethics from coinciding with the project and introduces a criterion of

rightness and wrongness where there was only animal appetite seeking its satisfactions. In animals there is no right or wrong; in us, there is.

It is the agency of reason that is the principle and source of this structural negativity that opposes impropriety to the evidence of the percept, leisure to the busyness of animal labor, absence to biological presence and arbitrariness to biological necessitations, frustration or abstinence to the appetite for enjoyment. The agency of reason, contradicting natural reality, empties what is naturally full, and opposes the positivity of nature with the negativity of culture. To speak in Lacanian terms, it introduces a four-fold *manque-a-l'etre* (lack-of-being), a void, an emptiness, an absence, negativity at the heart of human nature. What Lacan calls '*manque-a-l'etre*', Gagnepain deconstructs as impropriety, leisure, absence and arbitrariness, abstinence. In us, the immediacy of life is always mediated by our signs, tools, histories, and norms. Nature, Gagnepain says, abhors a vacuum but culture requires one. We are that emptiness, that vibrant void, that power of abstraction which marks our ways of being-in-the-world as those of 'unfinished animals'.

At the same time that the agency of reason negates animal gnosis, praxis, somasia, and boulia, it also structures them by means of a double organization: the reciprocity of two faces/sides, and the articulation of two principles, one of difference or taxonomy, the other of segmentation or generativity. Here linguistics and, more exactly, glossology serves Gagnepain as a model and he will extrapolate from the glossological model of signification analogous structurations of the stuff of our humanity on the levels of ergology, sociology, and axiology. We cannot examine this here. Suffice to say that what is at issue here is the work of reason -- at work, remember, 'unconsciously' or implicitly: we are not conscious of this work of reason even though our scientific analysis can discover it after the fact --

transforming the natural materials: the sounds and the senses of animal symbolism, for instance, into signifiers and signifieds themselves organized phonologically and semiologically into structures of signification that make possible our capacities to speak; or the physical means and ends into fabricators and fabricateds themselves organized mechanologically and teleologically into structures of fabrication that make possible our capacities to use tools. There is here a vast terrain of scientific investigation which provides the 'subject-matter' for what the theory of mediation calls 'glossology', 'ergology', 'sociology and history', and 'axiology'.

Let us pass to the level of performance. Our performances will "use" all these 'structural ordinations or determinations of reason' in our speaking, making, being socially and historically, taking charge of our behavior. The contradiction of the agency of reason and nature is resolved in the performances whereby we attempt to refer our words rhetorically back to the reality to be said, our tools industrially to the reality to be made, our persons politically to the societies and histories to be created, our norms morally to the advent of a free humanity. Human culture consists in these performances: human culture is what we realize in our speech, our art, our history, our liberty.

Let us pause now and take a very deep breath. This last section has been heavy slogging, all the more heavy in that I felt I had to present this essential aspect of the theory and yet I know very well that a general presentation, though it may give an over-all idea, is not sufficient for an adequate understanding. In any case we have done it. I will be glad, if you like, to discuss these matters more fully later but, for now, we must move on. I will not spend any more time here on the ways the agency of reason organizes and structures its materials in the silent depths of its praxis, at work, once

again, in us without us.

In the time that remains this morning I want to review what the theory of mediation calls the parameters and the aims of reason, and then try to clarify the vexed relationships of art and aesthetics.

First, the parameters and the aims of reason.

Our performances do not escape the contradictions introduced into our situations by the agency of reason but they do contest them and try to resolve them -- although never perfectly. In elaborating our conceptual thought, for example, we do not escape from ambiguity but we do contest the ambiguities imposed on us by grammar (e.g., polysemous words and syntactical constructions) and we try to correct them in saying what we want to say. In manipulating our tooling we do not escape the polytropic puzzlement imposed on us by technique (Just what is this thing for? Just how does this thing work?) but we do try to overcome it in applying it to the task at hand. In neither case do we ever fully succeed: any return to the simplicity of the real is definitively ruled out. Our situation, in other words, is always problematic. Grammar and technique contradict the natural reality and definitively distance us from it. It is just this distance, this absence, this abstraction, that makes us think and makes us work and keeps us at it.

The situation in which we find ourselves as speakers or makers (or historians or judges) is complex and has various dimensions or levels which affect our performances and which the theory of mediation characterizes in function of various parameters. There is nothing sacrosanct about these parameters: they are a kind of logical convenience. But they do allow us to clarify the situations we face as performers.



Take speech. One of the parameters is obviously the object we are talking about. Another is the speaker herself with all her concerns. Another is the person to whom we are addressing our message. Finally, there are what we may call the framing conditions of the message (or any other performance). In scientific discourse, the object is clearly the preeminent (but never the only) parameter. Even when speaking scientifically, I will speak differently if I am with one or two friends or before a large audience of physicists or philosophers. Or I can be mostly concerned about myself: how much of the excited chatter of teenagers, or the self-satisfied lecture of the narcissistic professor, is not about the object being spoken about, or those being addressed, but about the person speaking. The framing conditions also affect our performance: if the building is on fire, I do not give a lecture; I shout "Fire!". Similarly, if I am sending a telegram or putting a message on a postcard. I speak differently in a courtroom than in a barroom, in an auditorium than in a confessional. In short, I take a nuanced and differentiated account of all of these factors in speaking my message and every message is a function of these parameters which vary in importance depending on the situation. What Aristotle said about moral behavior is roughly true of all of our performances: we need to take account of the time, the place, the manner, the people, and in all of these regards we can pay too much attention, or too little. It is difficult, Aristotle said, to hit the mark, to get it just right -- in any of our performances. That is surely true but these parameters, though exterior to the theory, make it easier for us to clarify our situation and to say what it is we are trying to get right, in our speaking, our making, etc.

The struggles in which we are unendingly engaged as we try to overcome in our performances the problematic, contradictory situations in which we find

ourselves are carried out in three different ways which Gagnepain describes as the three aims of reason. Gagnepain discerns these three different aims in the performative exercise of any one of our four modes of rationality.

Two of these aims are practical, one is aesthetic. Practically, either we try to conform our performance to the reality of the situation, or we try to conform the reality of the situation to our performance. Or, aesthetically, we take our performance itself as our object.

Consider speaking and making.

In most conversation and, certainly, in scientific discourse, I try to make my words conform to the reality of what I want to say. If I tell you that it is a lovely day, it is because I think that my words conform with the situation. Idem when I am explaining something like the theory of mediation. Or take my making. If I lay out ditches in my field and connect them to a water source, it is in order to transform the productivity of my field and I conform my making to the situation at hand, the typography of the field, etc. My aim, Gagnepain will say, is 'scientific' in the case of my speaking, 'empiric' in the case of my making. Those are one sort of practical aim: the sort whereby I adapt my performance to the situation.

But I can pursue another sort of practical aim: I can try to adapt the situation to my performance. As Bruneau points out, that is, notoriously, what the Greeks did when they attempted to explain things they did not understand: they personified them. The clouds floating over a lagoon they called daughters of water: nymphs; thunder became Zeus; the terrible storms of the Aegean were the works of Ouranos. Where they could not justify the use they made of words in the sense that any science tries to

justify its words, the ancients concoct a reality for the words they use. Gagnepain calls this practical aim, on the level of speech, myth. On the level of making, he calls it, not myth, but magic. If my tools do not conform to the world, I make a world that conforms to my tools. The drums that the medicine man beats will bring the rain; the dances danced and potions drunk and masks worn will ward off the illness or bring fertility or reward our warriors in battle.

These mythical and magical performances are not only found among the ancients or primitives. They are very much alive and well among us, just as are science and empirics. Think of our politicians and their evocations of “a kinder, gentler America”, or “the good old days”, or “the free market”, or “the universal rights of man”. Think of the rabbit’s foot in your pocket, or your lucky coin, or any other of the rituals whereby you try to transform the world, not empirically but magically. These are practical ways we try to restructure performatively the structures that the agency of reason presents us with.

But our performances can also take themselves as their aim; the aim here is not practical but aesthetic. For instance, instead of trying to relate our words to the reality to be said, or the reality to be said to our words, our speaking can establish relations to and within the words themselves in such a way that the message does not say the world, scientifically or mythically, but, so to speak, says itself. In the case of speech Gagnepain calls this endocentric aim of reason ‘poem’. In the poem the complexity and alternation of the rhythms say the message in their recurrent sounding. We all remember favorite examples from high school English: ‘the tintinnabulation of the bells’, ‘quoth the Raven nevermore’, and a thousand others.

And as Gagnepain points out, the rhymes are not only recurrent repetitions or alternations of sounds (though that is what we usually understand by rhyme) but also of senses/meanings, as in many prose poems where these repetitions of the meanings are analogous to the refrains of songs. Our 'rhyme' comes from the Old English 'rime', itself influenced by 'rhythm'. The poem sets up its own system of rimes and rhythms and it is they that carry the poem and say its message in the unique combination of tones and movements that compose the poem.

The same is true of our making. Instead of relating the tooled materials to the reality to be made, or the reality to be made to the tooled materials, our making can relate the tooled materials to and within themselves in such a way that the tooled materials do not transform the world either empirically or magically but, so to speak, transform themselves into a work of art. Gagnepain calls the endocentric aim of reason here 'plastic' (*plastikos* : can be shaped or formed).<sup>1</sup>

The same is true in the political and the ethical domains. Our politics, for instance, can try to conform itself to the situation (progressive, politics of the left), or the situation to the politics (conservative, politics of the right), or our political performances can take themselves as their aim and simply celebrate our being together in what Gagnepain calls 'celebration'. Our ethics

---

<sup>1</sup>Let us note that the theory of mediation uses these words very precisely. 'Work of art' as it is usually understood involves, as we will see more fully in a moment, a profound misunderstanding of art, or the work of reason, here. For the theory of mediation any human product can realize the aesthetic aim of reason; any human product, no matter how humble, can take itself as its object: a shoe, a dish, a wood carving, an airplane -- and when it does it becomes, so to speak, not just a product of our art-making capacity but a 'work' or an 'artwork'. Unfortunately, our ordinary ways of using these words do not carry the precision of meaning that the theory of mediation demands here. But perhaps enough has been said to indicate how, here on the plane of making, as also on the plane of valuing, the theory of mediation radically undermines the specious distinction between 'art' and 'craft'.

can conform itself to the situation (casuistry), or can conform the situation to itself (ascetic), or our ethical performances can take themselves as their aim and realize themselves 'heroically'.

Now I want to make two general points about the aesthetic aim of rationality as the theory of mediation understands it, and then conclude by suggesting a fundamental clarification that the theory of mediation proposes concerning our understanding of what we so confusedly call 'art'.

Clearly, Gagnepain's use of 'aesthetic' is somewhat different than the ordinary usage. I think you may agree that the aspect of our performances that Gagnepain understands in terms of the aesthetic aim of reason corresponds *grosso modo* to what is ordinarily called 'aesthetic' in a broad sense. But our word 'aesthetic' comes from the Greek for the ways we experience and represent things cognitively and affectively and, because it does, our ordinary usage of 'aesthetic' tends to reduce the aesthetic to something we 'know', and thereby confuse the aesthetic aspect of our performances with our talk about them. But our aesthetic performances are not only involved in our knowing, they are also and equally involved in our makings, institutionalization, regulations. The 'aesthetic' as the theory of mediation understands it is not a matter of knowing (though of course we can know it in its various modes); it is rather a particular rational capacity our performances have of structuring themselves -- of, so to speak, turning upon themselves and taking themselves as their object, traject, subject, project. For Gagnepain, the aesthetic is, as it were, the apotheosis of our reason. In accomplishing its aesthetic aim, reason structures itself, orders itself, plays with itself, and becomes itself its own measure. Our aesthetic performances are not, finally, measured by anything other than themselves. They are their own measure.

When do you have your poem, your painting, your ethical act, just right? When it is fully itself: a self-fulfilment. When it is, as Hopkins put it, its own 'achieve': There! There! is the achieve of the thing. It is just that that Willis Beal had in mind when he told me how he builds his lobster boats: he makes a drawing, then sets up his molds, then works at the lines "until I get it just right".

This leads to a second point. From the standpoint of the theory of mediation the aims of reason are not mutually exclusive and our performances can combine several at once. Our science can contain a certain amount of myth, our empirical tools some magic, our progressive politics a degree of conservatism: consider the art historian who would reduce artworks to signs (myth); the carpenter who would only use a Stanley screwdriver, or a yellow one, or the one his father gave him, because it brings him good luck (magic); the new Democrat who is an old moderate Republican.

More importantly for our considerations, the aesthetic aim of reason is not independent of the practical aims. Were it not for the immense prejudice of our relatively recent notion of Art which considers worthy of Art only those objects which have no practical purpose -- they, and they alone, are aesthetic objects -- we would of course have no trouble recognizing this. A knife serves a practical purpose, empirical or magical, but the artist can also exercise in its fabrication a sublimely creative aesthetic aim, burnishing and engraving the blade, turning the handle of precious wood until it not only serves the practical purpose of facilitating the grip of the knife-wielder's hand but is itself an harmonious piece of sculpture. The columns of a Greek temple serve an eminently practical purpose technicizing as they do the supportive function of the earth, but their signified shapes and elaborate

cornices, the carefully, lovingly, cadenced rhythm of their spacing, the shadows and light made to play upon their surfaces at different times of the day, all these also and at the same time realize the aesthetic aims of those who co-built them: architects, masons, sculptors, perhaps also painters since some, it seems, were painted. Look at your shoes. Look at the buttons on your shirt. Look at almost any fabricated object in this room. Is there any doubt that the practical and the aesthetic aims of reason commingle and coexist in the singular realizations -- or performances -- that brought these objects into being?

It is time to end, if not to conclude. I have tried to present an introductory overview of the theory of mediation using 'technology' as an example. During the rest of this Workshop, you will hear this material developed and deepened in a variety of ways. But, for the moment, I will count it a modest success if my remarks may have enabled you who are unfamiliar with the theory of mediation to better understand that the theory of mediation proposes a new, scientific method of analyzing human phenomena that is at once scientific and respects what is properly human; that it conceives human rationality as one but refracted into four different, analogous modes; that it recognizes that an adequate theory of human rationality must give a coherent account of nature, structure and performance, the three dimensions of human rationality that the theory of mediation understands in terms of a dialectical structuralism; that human rationality in each of its modes pursues three different aims, sometimes alone, sometimes in conjunction with others.

It is a complex theory, difficult if not impossible to present in a few minutes. But that should not surprise us. As Gagnepain often points out, no one is ever surprised that contemporary physics is a very complicated subject. Yet physics only deals with the laws of the material world. How much more

complex and complicated will our human sciences be, once we have created them. The theory of mediation is only a first step towards the creation of a veritable human science. Thank you.