Metalogue: Gregory Bateson, Paul Ryan

The first time I met Gregory Bateson was at a Princeton Conference on Social Change in 1970. The conference of twenty people had no agenda and soon became a battle over procedure around a square of tables. After the others had gone to bed the first evening, a dissenting cluster of us scattered the tables and chairs about. The confrontation that followed the next morning climaxed with a prominent mental health official hurling a table at the video equipment. He missed. I heard myself shouting, "You guys are supposed to be the heavies. I'm the youngest here and I haven't heard a thing I haven't heard from my friends. You complain nobody listens. Okay. Come on. Let's go to it. Sit down your heaviest cat and we'll turn the camera on him and listen." All eyes turned to six foot five alpha male, Gregory Bateson. He sat in front of the camera and deftly asked if I could sit and talk with him. I found myself in a metalogue. Metalogue is Gregory's mode. A metalogue is a conversation about some problematic subject. The conversation should be such that not only do the participants discuss the problem, but the structure of the conversation as a whole is also relevant to the same subject. For example:

Paul: What is a question?
Gregory: Why do you ask?

The problematic subjects that Gregory deals with are not trivial and his mode of thinking about problems is not easy to grasp. At the Princeton Conference, Gregory was passing out Xerox copies of a paper titled "The Cybernetics of Self, A Theory of Alcoholism." It took me over a dozen readings to understand, yet

the effort was well worth it. It was the clearest approach to understanding addiction I had ever seen and was very helpful to me in my efforts to understand what happens when someone sees him/herself on videotape. Yet I found that though the paper was highly suggestive, like so much of Gregory's writing, it did not quite resolve the question. I began to develop another approach based on extensive original experience with videotape.

In a nutshell, I see the difference between Gregory's approach and my approach as the differences between working from a logic of classes and working from a logic of relationships. To me, the key tool in Gregory's explorations has been the theory of Logical Types which states that "No class can be a member of itself. The class of chairs is not a chair The name is not the thing named.

The theory of logical types was key in developing Gregory's understanding of schizmogenesis as discussed in the article on relationships and in formulating the double bind theory of schizophrenia. The schizophrenic is one who has habitual difficulty in discriminating levels of logical typing; he is constantly eating the menu card instead of the meal. This condition results from a pattern of upbringing in which contradictory, or double bind messages, are habitual. For example, a mother says to her child, "Go to bed, you're very tired and I want you to get your sleep," while the non-verbal message is, "Get out of my sight. I'm sick of you." The logic of relationships I am working with is not based on naming and classifying, but on positional differentiation in a unique figure (See Fig. 19, p).

Over the years of working with this logic of relationships, I kept in touch with Gregory. He was generous and patient with his time and patiently responded to the somewhat muddled letters I sent. In October of 1977 we agreed to meet in

San Francisco and metalogue. At the time Gregory was looking forward to going into retreat and finishing the book he was working on. We went to Rosebud's Restaurant ("good imitation English"). Gregory ordered beef, I ordered salmon and switched on the tape recorder.

G: Tell me what's on your mind, man.

P: Well, Gregory, I see the work you've been doing as having disclosed a host of felt difficulties in the human situation. Things like schizophrenia, confusion between complementary and symmetric relationships, map/territory confusion, misidentification of the unit of evolutionary survival, and so forth. All these things have been disclosed by the explorations you've made.

G: They tend to be pathogenetic pathways, so to speak. Not necessarily so, but potentially so, at least.

P: I've been playing around, working with video now for about ten years, dealing with perception and behavior…

G: And with Klein bottles and Rene Thom [author of *Structural Stability and Morphogenesis*] and all that. Yes, well, I began, more than I ever did, to get some idea of why you're playing with these things and what your stuff is about. I was formerly very puzzled by this.

P: There is a real dissonance between my video-correlated experience of these difficulties and your articulation of them, insofar as articulation might lead to resolution.

G: Solving is another problem as well.

P: Yes. And for the sake of this metalogue, I will challenge your way of thinking. In a Kuhnsian sense I will attempt a paradigmatic challenge. I will say that the terms of disclosure are not the terms of resolution.

G: That may well be.

P: What I would like to do is put up the work I've been doing as a possible resolution.

G: Well, I, at any rate, have not mainly had my eye on resolution in identifying these things; therefore, there was no primary reason why the way I described them should have been the right way for resolution. So, all right, good enough, let's try.

P: I thought the way to come into it would be put the Kleinform paradigm up against the criterion for a unit of evolution, that you described in "Form, Substance and Difference."

G: Yeah, yeah.

P: If you would accept the following as a statement of criteria, I would enumerate three.

G: Okay, let's go.

P: First thing it would have to be a complete circuit.

G: Yes.

P: Second, there would have to be in the circuit one relation such that more of something meant less of something else.

G: Right. Self-corrective circuit.

P: And the third criterion would be that it would have to transform differences that made differences.

G: Right. This is all my sort of criteria.

P: Right.

G: Only one I would add to that is something about logical typing.

P: Well, there's where we'd get at loggerheads.

G: Oh yeah. Good.

P: Can you say, in some way, what you would add about logical typing?

G: Criteria for what? Criteria for…

P: Criteria for a unit of evolution, for a unit of mind.

G: Well, the recognition of mind at work. That the phenomena that one is dealing with are on the whole mental phenomena. In your criteria you offered just now, there are complete circuits, self-corrective circuits, differences that make differences. Now in order for differences to be effective, you have to have an energy supply. This is one I would add, therefore. Metabolism, usually.

P: But that's not logical typing.

G: That's not the logical typing. Now, I'm not quite sure whether I would add the logical typing in the criteria for evolution. For mind, yes. For evolution, well now, wait a minute. If you look at an evolutionary series—this is really the first thing that people like Darwin saw, before Darwin, even, it was the fact of homology. Now there are two uses of the word homology. In one use we say that your front limb, which has a single bone in the upper arm, two bones in the forearm, three bones, then one, then five in the fingers is homologous with the fore limb of a horse, and in a more distant way and in a more distant range with that of a fish, even. But by the time you get to the fish, you've lost the detailed structure. But the horse again has the single bone, the two bones, the one bone, ant then it deteriorates into the single finger on which the horse walks. But that idea of an underlying pattern which is then modified from species to species, or genus to genus, that idea is the basic idea of homology. Now you also have it as an internal idea to the individual, in which your arm is the homologue of your leg. One bone in your forearm, one bone in your thigh, two in your forearm, two in your shin, etc. That is, it looks as if the mechanism of growth determination had in it somehow, the idea of a basic pattern and a modification of that pattern, and as if the evolutionary sequence had in it that sort of idea. And that, I think,

is what I mean by logical types insofar as one can trace them in the evolutionary sequence. For the sequence to be characterized all over in that sort of way, I think, means that the DNA messages have to be classifiers and modifications of classifiers.

Now a unit of evolution, a unit of change, you see, you get into the Kuhnsian sort of problem at once. Are you going to change the paradigm, which might be the pentadactyl limb, or are you going to change the way it works at a given moment? These are different orders of change.

P: I'm thinking of resolution. It has to do with change itself. The change I'm thinking of can't be decoded in terms of logical typing. It's like the starfish having its own internal system of communication about morphology and behavior. The number five may not be necessary to the communication system, and when we say it has "five arms" the statement is partly false, although it makes something of a bridge between our way of knowing and the way of the starfish. The Kleinform is in some sense a starfish. It has its own internal communication pattern.

G: Um-hum.

P: Which does not need logical typing any more than the starfish needs the number five.

G: Let me say what I understand you to have said. The Kleinform does not need logical typing. Now, as I understand it, a Kleinform is important to us in that you suggest that we should map what we find in nature, we should map our phenomena onto tautologies based on this essentially abstract form.

P: Not . . . not really. The mapping phenomena is probably more successful with logical typing in terms of explanation. You can

explain the limb more successfully than it could be evaluated by attempting mapping it on a Kleinform…

G: By mapping it onto some other…

P: By mapping it onto a series of logical types.

G: Which is another tautological system, perhaps an overlapping one.

P: Perhaps.

P: Okay, Russell would say that to treat the relationship "is a member of" as intransitive is what generates the paradox. Is that a fair statement?

(Laughter.)

G: I'm not sure that's right for Russell…

P: But that would be how you would think of it.

G: Yes. Um-hum.

P: I would contend that in the Kleinform, explanation itself is intransitive.

G: Oohh. Am I using explanation in the same sense you are? I'm not sure. By explanation I would mean mapping a bunch of phenomena onto a tautology. The tautology being such that you cannot doubt the steps contained within it. The propositions you can doubt, but the steps you cannot. If P…then P…all right. This means that what is contained in the tautology is relations, only relations

P: Right.

G: In order to explain, we build a tautology and map the things onto the tautology. And in order to strengthen our explanation we shall then go into what Peirce calls abduction and find other cases under that tautology.

P: I would say that there is no territory or phenomena that we're attempting to explain within the immanent understanding of the Kleinform. That the Kleinform offers an explanation of itself.

G: So it's a geometrical quasi-special tautology within itself. Its connections within itself are undoubted.

P: Yes.

G: Undoubtable.

P: And perceptible.

G: Perceptible in presentations of Kleinforms.

P: Right.

G: You don't have to represent, it's a convenience, it's nice.

P: Now I'm not sure what you mean by representation.

G: Well, you know, it's a bottle with a thing.
(Laughter.)

P: Gregory, the insistence that you have that the map is not the territory. Okay. Axiomatic in terms of a way of approaching things.

G: That's old Korzybski, right.

P: Yes. As I understand it, this axiom is an insurance that logical typing not be confused.

G: The territory not to be confused with the map. Right. Don't eat the menu card.

P: Now, in the Kleinform that I'm working with, there are times in which the map becomes the territory and the territory becomes the map. One part would be explained by being contained by two other parts.

G: Right.

P: And in that instance we could call that the territory to be explained.

G: Wait a minute. So you draw the pictures. But these are not pictures of something. These are pictures about something.

P: There's no something as far as I can tell.

G: Oh, then, I don't know what you're at. I'm stuck again. Well, I can say what I understood you to be at. At wanting to describe, what

shall we say, a process of embryology. And within the embryology, there would be relations such that there would be whatever it is, these sort of descriptive statements you'd need to make about the embryology. And they would be related, as these three parts of the kleinbottle are related to each other. It would then be suitable to map them onto a Klein bottle. That's not what you're at.

P: No, no…it's not.

G: Then I got you wrong. And I was so proud of myself. I thought I was getting…(Laughter)

P: I feel it's close, somehow, but…Let me try it this way. This is not propositional. The intelligence here is not propositional.

G: The intelligence of no tautology in the end is propositional.

P: I didn't realize that about logical types. There's more flexibility there than I'd thought.

G: I mean, yes, there's Euclid. A mass of ideas about space which are secondarily translated into axioms and postulates. But primarily…it's a big picture. A changing picture and a picture which has this way, that way, sorts of things in it all the time. We pull that out into axioms, postulates and definitions and what not. And we build theorems and we map this and that onto that Euclidean stuff. In my language it's called explanation of that which is mapped onto that.

P: In your language I don't see the admission of the possibility that something might explain itself. Where explanation would become intransitive.

G: The relation between the phenomena and the explanation is now intransitive so that this relation is the same as that relation.

P: Not the same. But intelligible in terms of.

G: If A explains B, then B explains A. Intransitive in that sense.

P: All right, but you need a minimum of three to understand something positionally.

G: Yes, I agree. To give it a direction, a twist.

P: It's directionless, really. Non-orientable. It does not require assigning direction.

G: I want to know what language you use to talk about these positions. It seems to me that language is going to be bloody important.

P: The best avenue to that language I can find is in Peirce's categories of firstness, secondness and thirdness. In his later writings he claims that these categories are based on observation, and not language. I think that where you, Gregory, talk about the dichotomy of form and substance as being an unconscious deduction from the structure of subject predicate, that always rang very right with me. As it seems that, in fact, is the case.

G: Um-hum.

P: And there's no way to break that dichotomy using…

G: Subject-predicate.

P: Using subject-predicate.

G: Right, right.

P: So that this kind of positional thinking, which is complete and consistent, observable within itself without jump to language, seems to hold the possibility of dealing with things without that dichotomy.

G: I've been spreading out some new sorts of approaches lately, just beginning, really. It would seem to me that an addiction, which may take only one person and a bottle, not two persons; to that extent, perhaps simpler to think about; tends to have a

characteristic that if you take the next slug out of the bottle your immediate discomfort is going to be relieved; but over the long term, this is lethal. And if you're going to look at the long term and refuse the short term, you run the risk of very considerable pain and suffering, deprivation, and so on. This is a sort of double bind of some kind. It's a double bind between this level of context and this level of context. You oscillate between them, and neither of them is tolerable. Now, it is interesting that there are people, indeed perhaps all people, who deliberately put themselves into situations having this structure. They, for example, go mountain climbing. If you're halfway up the mountain and your legs hurt, and you're hungry, and you're tired, and you're getting an ache behind the eyes, and you're pouring sweat and what else, you know. Obviously, the sensible thing is to sit down, eat your lunch, and go home. But mountain climbers, for some reason, perhaps best known to themselves or to God, in fact go on sweating it out, and deal not with the minor gestalt, but with the major gestalt. They get to the top of the mountain and may leave their bones there, as my friend Leigh Malory did. He's now on the side of Everest, somewhere. But I don't doubt he knew this was worthwhile. Why is it worthwhile? Well, it's worthwhile because this is the formal isomer, a formal pattern equated to a formal pattern, of the double bind thing. Presumably, when climbing a mountain, there is some sort of learning which is felt to be relevant to human deep values in some funny way. These are not double binds into which somebody puts you. You walk in there with your eyes open, having been there before last summer when you climbed Mont Blanc. This summer, for some goddamn reason, you've got to get up the Matterhorn. (Laughter.)

Waiter: Can I get you gentlemen anything?

G: Can I offer you a drink?

P: Sure, why not?

G: I would like a *creme de menthe*.

P: I'd like a rusty nail.

G: I'll have mine frappe. This is very interesting. It obviously does not require that they explain to themselves what they are doing.

P: Right.

G: Perhaps the contrary. It might be bad for them to explain what they're doing. Now set against this is is a very interesting observation of Samuel Butler. He remarked that if the headache preceded the intoxication, alcoholism would be a virtue. (Laughter.) This is not a trivial remark at all. This has to do with the whole topology of relations and suffering and discipline, all this stuff. And even being nice to one's friends.

P: "If the headache preceded the intoxication"…

G: The intoxication, the "high."

P: "Alcoholism would be a virtue."

G: Be like mountain climbing.

P: Right. For Aristotle, virtue was a habit of right reason and ease about something to be done.

G: And ease. Yes? That's nice. What was the Greek for "ease", I wonder.

P: I don't know. So you get the "ease", the "high", without the habit. So what's that difference, Gregory?

G: It's very subtle. Now I throw this out because it ought to be relevant to something you're doing.

P: It is, yes. I'm not sure just how, but it is. An addict is not just playing around. He has to take his habit seriously.

G: Then we're in the same ball park, somewhere.

P: Yes, and I would like to…leave the Kleinform alone and pursue…

G: Pursue drunkenness

P: I remember once you said that until we understood the relation between orgasm and addiction, we don't really know much.

G: That's right. Did I say that?

P: You said it.

G: For addiction I said it, yeah?

P: The relation between orgasm and addiction. I thought it was…

G: For orgasm and these cumulative interaction things; schizmogenesis and so forth. There's a new piece of data around, by the way, on orgasm. Going the rounds. (Laughter.)

P: What have they got now?

G: The gossip is that the state department put up some money for research in dealing with jet lags. And a research team was formed to investigate jet lag, and they came up with their reports and all that, aspirin and so on. But the actual answer that was never published was that the way to get out of jet lag was orgasm. (Laughter.) I don't know whether the story is true, or apocryphal.

P: The gossip from the ground crews at airports is that the flight crews ball like bunnies.

G: It would be nice to know, wouldn't it? For those of us who travel. Is there a difference between orgasm when you are traveling East?

P: And when you are traveling to the West? (Laughter) Resolves the directional confusion by blowing out…

G: Blowing out…

P: The orientation mechanism…

G: Those tubes…(Laughter)

P: So where are you going with the mountain climbing stuff?

G: Well, I don't know where to go with that. I'm sure it's just around the corner there. We've never known why a culture goes uphill. We know why cultures degenerate. Very obvious. They degenerate through laziness, muddleheadedness…you know. But why do they ever get more elaborate, more beautiful, richer? It obviously always pays producers to deteriorate the taste of their consumers . . . Hence our public relations system.

P: And television.

G: And television and all that, that's right. If there is anything sacred around in the culture, obviously the thing to do is to attack it, and attach it to a chocolate bar.

P: That's right.

G: Sell it with chocolate, and so on. Now it sounds like that business of the mountain climbers and addiction might have something to do with how cultures go upwards.

P: Awareness of a very broad gestalt.

G: Very deep, unconscious influence of a very wide gestalt. I don't think it's conscious, and I don't think it's even desirable. It should be in a sense. You and I will go mix in and make it conscious for ourselves…

P: And the business of addiction gets taken care of…You allow a lot of flexibility to the variables. So you are not forced into…

G: A narrow pathway…maximizing a single variable. So where does one go with such a thing?

P: How to keep it away from chocolate bars.

G: Yeah. Wilson's vinegar.

P: I don't know that.

G: The story of Wilson's vinegar? He sold vinegar. And he advertised in various ways. And, finally, he was an Englishman, he attended an American conference of advertising men. And they said he didn't do it right at all. You should come to us. And for half a million bucks we'll put on a campaign for you. And he said, "A campaign?" And they said, "Sure, we'll get Norman Rockwell, somebody that paints sacred pictures to paint a sacred picture for you" What's vinegar in the Bible? Sure, sure, see. Christ on the Cross, the two thieves, and the centurion with a sponge on a stick, and the words, "Take it away, it isn't Wilson's."

P: Jesus. (Laughter.) How do you keep ecology from becoming a myth?

G: Oh, ho, ho. I don't know. It will, without the aesthetics.

P: Become the myth?

G: The aesthetic thing has got to be solved. This is the most important point, I think.

P: This may just be a catholic take, okay, but . . .

G: Yes, go on, I know…

P: But I'm fearful at times that your work will become used, without an understanding, as a kind of Thomism of ecology.

G: Could be, easily could be.

P: And your own capacity for sensitivity and aesthetic will be left by the wayside.

G: Left by the wayside. Yeah, I think this is quite probable. Already my publisher on the back of the book says this is a guide to inner space. (Laughter.)

P: That's why I want to push you on some of this stuff. I saw what an orthodox Thomism can do, Gregory. It's not pretty.

G: Yeah, I know, I know. And Saint Thomas was a very clever man.

P: You know, before he died he said it was all straw.

G: All straw? (Laughter.)

P: He said, "It's all straw." And they wouldn't believe him.

G: Poor man.

P: I think that's why I rail against the hierarchy.

G: Oh, yeah—that hierarchy.

P: I think as description it's elegant.

G: But how do you get away from it. The main thing is to keep the top open, I think. The number of steps in the ladder is not to be finite.

G: Who was it, somebody was in the office the other day asking if there were any Taoist priests. They wanted to be married by a Taoist priest. I said, "Of course there are no Taoist priests, that would be against the rules." (Laughter.) But I've no doubt there are millions of them.

P: Probably. It's the institutionalized rival. The marriage needs an institutionalized rival.

G: Yes, right. In a sense, to be married by a Taoist priest is a terrible contradiction, isn't it?

P: Yes. I got to thinking about priesthoods a few months back with that case of the nun in Syracuse who had carried a baby to term in the convent and they found the baby dead and stuffed in a toilet.

G: God, I didn't hear about that.

P: She was acquitted on the grounds of being temporarily out of her mind, and not responsible. I was thinking about it in terms of the controversy over women becoming priests. Perhaps priesthood based on sacrifice has had to be reserved to males because if the culture allowed the possibility of a woman performing an act of human sacrifice it would release the hatred of mothers toward neonates and destroy the loving bonds necessary for nurturing.

G: When I was working with schizophrenia, I thought about the fact that with all mammals, except humans, when the relation between the mother and the new born is seriously disrupted, the mother eats the young.

P: Eats the young?

G: Eats the young. I couldn't do much with it at the time. The human inhibition against this seemed to have something to do with generating schizophrenia. Perhaps with Thom's models, something could be worked out.

P: Thom has fairly clear models of the relation between predator and prey. He regards the nervous system in a sense as an organ of alienation. The predator must allow itself to be dominated by the image of the prey, temporarily become the prey in order to effect capture. He uses a similar bimodal model to account for gestation. I always thought it had something to do with your double bind theory.

G: Perhaps it does.

G: Did you notice that plaque over there?

P: About the Rolls Royce?

G: About how to convert your Rolls into an armored car.

P: It reminds me of a French film I saw recently about the Holy Grail. Lancelot du Lac…The guy shoots mostly armored torsos. It was amazing. The beginning of the metallization of the human personality. Body armor and all that.

G: Ah, E.B. White did a book on King Arthur. I don't know where he got the stuff, but he had Merlin teaching Arthur to be a king. Of course Arthur didn't know he was being trained to be a king. One of Merlin's main techniques was to have Arthur become the various wild creatures in the forest.

P: Wow, I have some friends who are now doing something they call reinhabitory theatre. All the characters are animals native to northern California. They have one with a lizard and coyote going back and forth about how to create man. It's great.

G: You should tell them the story of Tuan MacCarill.

P: I don't know the story.

G: It's in a book of Irish Fairy Tales by James Stephens.

P: The man who did Crock of Gold ?

G: Yes, that's the man.

P: What is the story, Gregory?

G: It seems the Abbot Finnian heard about a powerful man in Ulster named Tuan MacCarill who believed in the old gods and the ancient ways. This the powerful Finnian did not like, so he went to the castle of the Ulster gentlemen to preach and prove the new God. The Ulster gentleman barricaded his door so Finnian could not get in. But Finnian sat down outside and went into a meditation and fast that he would only be released from by admission, or death. After many days Tuan relented and let Finnian in. Finnian proceeded to instruct Tuan on the majesty and love of the new God. And Tuan was indeed impressed with the new doctrine, and pressed Finnian for more and more. Finnian finally felt the need of instruction himself, knowing that to only give and not receive was to allow the spirit to grow faint, and wisdom itself to grow bitter. So he persuaded Tuan to tell him about himself, starting with his genealogy. Tuan was reluctant, but finally relented. "I am Tuan, the son of Starn, the son of Sera who was brother to Partholon…and I am Tuan son of Carill, son of Muredac Redneck." "But how can one man have two fathers, and how can you trace yourself back to Partholon? He came to Ireland not long after the Flood," said the

Abbot. "I came with him," said Tuan. Well, Finnian mumbled his prayers and sat back and listened as Tuan told his tale. "There were 24 men and 24 women in all when we came after the Flood. From these 24 couples came 5,000 people living in contentment with the fishes and animals of Ireland. Then suddenly a wind came up that brought a plague lasting for seven days, and when the plague was over only one man was left alive, myself. "I was alone, and lived for years as a beast—forgetting the ways of man. And when after a great time I saw a fleet of ships with more people coming to Ireland I wept to think of my old age and loneliness. But a great storm arose and crushed the ships before they could land, and beat me into slumber. Then I dreamed, and I saw myself changed into a stag, and I felt a new heart, a strong neck, and new limbs. I awoke, and I was that which I had dreamed. I bounded and ran. The world was new. I met all that came. I became the beloved, the well known, the king of the stags. But the anguish of my loneliness came to me again in old age. And the wolves came and forced me into the cave where I had been as an old man. And on the edge of my doom, I sank into a slumber—and I dreamed I saw myself changed into a wild boar, with a new heart and a strong neck and new limbs. And I awoke and I was that which I had dreamed. And I tore the wolves to pieces and became a champion of the boars killing bears and wolves, beloved among my tribe. I challenged all the creatures but one. Man had come again to Ireland. And there was sadness in my heart when I remember the people of Partholon and how I was listened to and loved among them.

"Old age again took me and I went to the cave and dreamed my dream. And I awoke and I was a hawk. I learned every nook and cranny in Ireland from the air.

"Old age came again, and I dreamed my dream. And in the dream I became a salmon. I awoke in deep waters, and was that which I had dreamed. In all my changes I had joy and fullness of life, but none like in the deep water. I had no encumbrance of limbs or wings. I was complete from head to tail. I could move with one movement. And I became the king of the salmon. And I ranged with my multitudes the world over, deeper and further than any salmon had gone. But I remembered Ulster. And there came in an instant an uncontrollable anguish to be there. And I knew I must reach Ireland or die. The task of getting there was incredible. But the brave heart of a salmon and the love of Ireland bore me on. I arrived near dead, but triumphant in the waters of Ireland.

"My strength returned and I delighted in the waters of Ireland. But all sought to catch me, and I received many wounds, especially from the men. I got no rest. My life became a ceaseless struggle, and then I was caught.

"The fisherman of Carill, the King of Ulster, caught me in his net and pulled me from the water. The air was like fire, and the light blinded me, and he took me to his queen. When she saw me, she desired me. I was put on a fire and roasted, and she ate me. And as time passed, she gave birth to me. And I was her son, and the son of the King. And this is how I came to have two genealogies. And two fathers. And all these things I remember."

Shortly after this metalogue, Gregory went into retreat to work on his book. Six months later, with the book still undone, he was diagnosed in a San Francisco Hospital as having near terminal lung cancer. At seventy four years of age, he politely refused chemotherapy, went home, recovered spontaneously and finished the book. In so far as cancer somehow signals our desecration of this

planet, *Mind and Nature* can be read in terms of recovery. The text turns the reader's mind toward understanding nature as a slowly self-healing tautology. The implication is that by a clear understanding of the patterns that connect perhaps we can learn to affirm our part in the consistencies of nature rather than involve ourselves recurringly in runaway ruptures.

This is not an easy book. Fifty odd years of thinking about patterns in partridge feathers, courtship, the armaments race, computers, schizophrenic families, alcoholic addiction, porpoises, gurus, and students has honed a singular intelligence now recognized as seminal in this century. Seminal thinking is never easy to understand, even when the thinker gives us as articulate and mature a statement as *Mind and Nature*.

Bateson recognizes the difficulty. He explains how originally he intended to write two books. One was to be called *The Evolutionary Idea*. It was to be a reexamination of the theories about biological evolution in the light of cybernetic theory. The other was to be an explanation of very elementary ideas. The explanation was necessary in order to create an audience that might be receptive to *The Evolutionary Idea*. Because the school system has failed to provide people with an understanding of elementary ideas, the second book was to be titled, ironically, *What Every Schoolboy Knows*.

What Every Schoolboy Knows became Chapter II of *Mind and Nature*. The "formal and therefore simple" presuppositions for thinking presented there are not exactly easy strokes to learn, although Gregory's explications are consistently lucid. Educators in search of "basics" will be fascinated by this chapter. The list includes:

- Science never proves anything.

- The map is not the territory and the name is not the thing named.
- There is no objective experience.
- The processes of image formation are unconscious.
- Divergent sequences are unpredictable.
- Convergent sequences are predictable.
- Nothing will come of nothing.
- Number is different than quantity.

Besides this chapter of formal presuppositions, Gregory also presents his cybernetic biology. The chapter entitled "The Great Stochastic Processes" will, I think, become a classic. The glossary explains stochastic in the following way:

> If a sequence of events combines a random component with a selective process so that only certain outcomes of the random are allowed to endure, that sequence is said to be stochastic. From the Greek, *stochazein*, to shoot with a bow at a target, that is to scatter events in a partially random way, some of which achieve a preferred outcome (Bateson 1979: p 230).

While the lexicon and level of abstraction of this chapter are the most difficult in a difficult book, working through the text yields a rewarding clarity. For my generation such clarity seems enormously important, if for no other reason than to finally get over the dreamy romantic hangover from the random sequences of the sixties and start working for preferred outcomes in the eighties. Woe to a generation that cannot dream. Indeed, true. But even more, woe to a generation that cannot die to its dreams.

To praise Bateson is not to suggest that his fundamentals and tools of thought should be adapted by a school system or even by a society on faith. Indeed

there are college deans and at least one state governor (Jerry Brown) who seem to be nibbling at Gregory with just such a possibility in mind. I tend to agree with the growing sentiment that without adopting some ecological orthodoxy we will be unable to correct our runaway destruction of this planet. However, to make of Bateson's work a kind of Thomism of ecology would be, in my judgment, a mistake. Used by Bateson, his tools of thought are elegant and beautiful. Wielded by a state orthodoxy they could easily breed ugliness and oppression, particularly in America.

British born and bred, Bateson speaks of a difficulty "almost peculiar to the American scene. Americans are, no doubt, as rigid in their presuppositions as any other people (and as rigid in these matters as the writer of this book), but they have a strange response to any articulate statement of presupposition. Such statement is commonly assumed to be hostile or mocking or—and this is most serious—is heard to be *authoritarian*" (Bateson 1979: 26).

Modern poets in the American grain have been among those fighting the articulation of presuppositions from across the Atlantic. William Carlos Williams speaks of going after Greek and Latin with bare hands. He shouts at us, "No ideas, but in things." Charles Olson goes after the hierarchies that presuppositions support.

> There are no hierarchies…
> there are only eyes in all heads
> to be looked out of.

But the poets cannot gainsay the clarity of Bateson's discourse nor what Bateson has seen through his own eyes, eyes trained in the skills of observation common to British naturalists. Indeed one of the things Bateson has seen and

documented is a hierarchy among dolphins, albeit in captivity (Bateson: 1974). In my estimation for a native of this continent to resist the Benedict Arnold complex re the American Experience and reckon with Bateson, it is necessary to situate oneself in the philosophic tradition of Charles Saunders Peirce.

Peirce attempted to deal with whatever was, in any sense, present to the mind. He considered his phenomenology broader and more fundamental than the English tradition which considers "ideas" as Bateson does. The very fact that the British have the habit of saying "There is no such idea" while at the same time describing the phenomenon in question rendered their approach too narrow for Peirce.

Let me acknowledge the major objection to Peirce. It is true that while he called for an architectural structuring of theory, he left us a haystack of texts pitchforked together. He failed to deliver what he said was necessary. My stance is this. I claim to have arrived at the logic of relationships Peirce pursued. Given this logic, it is possible to build the architectural understanding that Peirce intended. Such an understanding of mind would differ significantly from Batesonian orthodoxy. I fear a Batesonian orthodoxy would be authoritarian and nominalistic in character and ultimately become blind to the mind of nature so obviously alive in Bateson himself. On the other hand, a Peircean orthodoxy that reckoned with, but was not subsumed by Bateson's work, could maintain an adaptive openness to the realities of the ecosystem and have more chance of evading an authoritarian political structure. The politics would be more in the vein described by Hannah Arendt in her comment on Duns Scotus a man whose work had a major influence on Peirce (Arendt: 1978).

Let me repeat I am targeting a possible scenario occasioned by a man's writing, not the man. The logic of relationships I am presenting was arrived at in part through dialogue with Bateson, study of his work and the work of his friend and fellow cybernetician, Warren McCulloch. Moreover a sympathetic Peircean reading of Bateson is possible. One can read Bateson's *pleroma* in terms of Peirce's secondness (resistance, that which one struggles with, the brutal facts we are up against). *Creatura* can be read as thirdness (the realm of law, of habit, of regulation). Also, Bateson's own subjectivity can be understood as an instance of Peirce's firstness (freshness, uniqueness, spontaneity; being such without regard for any other). Moreover, Bateson himself has regard for Peirce and Gregory's work continues.

The logic of relationships that I contend makes Peirce viable was presented in the introduction to the above metalogue. In that metalogue I attempted to state Gregory's criteria for a unit of mind so that the logic of relationships could be discussed in terms of his criteria. In *Mind and Nature*, Gregory himself articulates his criteria. This articulation makes it possible to present the logic of relationships as a "unit of mind" in a more formal way which I do later on in this book in the chapter called "A Sign of itself".

Bateson's insistence on logical types has to do, I think, with a lack of appreciation for what Peirce calls prescinding, and for the realm of topology before the arrival of set theory. In some way that I cannot quite put my finger on, this is linked up with his preoccupation with a Euclidean mapping of perception (Bateson 1972: 487ff.). In Gregory's mind there is a strong necessity for orientation. Peirce's categories of firstness, secondness and thirdness preclude orientation and can not be mapped onto Euclidean space. The Kleinform works completely without orientation. It embodies a positional intelligence. Left and right, up and down, front and back make no difference.

Once the mind is freed to think positionally without orientation a logic of relationships naturally ensues. While Gregory is well aware of the ambiguity of left and right he seeks to resolve that sort of ambiguity through a zigzag of logical typing in which one cannot tell a zig from a zag without labels. I do not think it works. Moreover, to my mind, he has never successfully come to grips with intransitive relationships as articulated by McCulloch in his 1943 paper on heterarchic values. Intransitivity remains an anomaly in Bateson's thinking. Nor has he fully reckoned with the tradition of C.S. Peirce, a tradition more suited to making sense out of the rough and tumble of American experience. However intelligent and magnificent this man's discourse is, it remains the discourse of an honored guest and not an appropriate architecture for our experience and future.

Of course, Bateson lives. Happily, we have not heard the last from him. The final chapter of *Mind and Nature* is a metalogue with his daughter in which he talks about writing another book, this one about the region where angels fear to tread. That book would deal with consciousness, aesthetics, the sacred, and the relationships between them. In speaking of it Gregory says the question is "onto what surface should a theory of aesthetics be mapped."

When I visited Gregory in the Spring of '79 I asked how the book was coming.
"Oh, I've got about a hundred pages done."
"Did you start with a surface onto which to map aesthetics?"
"No," he said, "The book is a living thing. I water it every morning and every evening with my tears."