DISCUSSION

Although the questionnaires indicate that the majority of participants felt the seminar was a worthwhile experience, it is difficult to assess its impact on the participants and their involvement in their programmes. However, both the student participants and the planners seem to believe that participation in the seminar added to the members' personal and professional development, as well as increasing their involvement in the counselling programme and the university community. The students have undertaken to operate their own groups without departmental supervision and after the madatory group experience has ended. This would seem to strengthen the positive appraisal of the sessions, thereby supporting the continuation of the "non-seminar" for future students.

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Zucchini Mush as a Misguided Way of Knowing

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In order to perceive the world, we must necessarily draw distinctions. As Dell and Goolishian (1981) have said, "without carving the world into pieces by naming some of its 'parts' we can see nothing" (p. 178). According to Gregory Bateson, there may be "better and worse ways of doing this splitting of the universe into nameable parts" (Bateson, 1977, p. 244). Science is one such way of perceiving:

> As a method of perception—and that is all science can claim to be—science, like all other methods of perception, is limited in its ability to collect the outward and visible signs of whatever may be truth." (Bateson, 1979, p. 32)

We are limited by the sensitivity of our instruments—by the thresholds of our available means of perception. But ultimately, we are limited by the "eco-systemic" organization of the biological world. Heisenberg's Uncertainty Principle implicates the observer in that which is observed: "Our consciousness, our behavior, becomes part of the experiment, and there is no clear boundary here between subject and object" (Berman, 1984, p. 137). As Rollo May (1975) put it, "We don't study nature, we investigate the investigator's relationship to nature." In other words, in a world characterized by circular process and relationship, we must recognize that we exist and observe only *in relation.* The assumptions and methods which we bring to our research actually participate in creating the results we perceive and report. If we look with object-oriented glasses, we will indeed see insular entities that appear to have "substance," and "scientific" credibility. But then,

"experiment is sometimes a method of torturing nature to give an answer in terms of *your* epistemology, not in terms of some epistemology already immanent in nature" (Bateson, 1978, p. 42).

What then of the social sciences? If we start from a premise that as living beings, and as researchers, we are participants in a circular process of relation, then it is clear that research problems are not *things*, but rather part of a pattern of interaction. Cutting process into atomistic pieces is analogous "to stop[ping] the music in order to hear it more clearly," and, as Bergson (1955) notes, when music stops "it disappears!"

If we study the behaviour of a male tennis player by isolating him from the context of the game, then we narrow our focus to one side of the net. We see him swinging a racket and hitting a ball that comes from "nowhere" and returns, usually at a slightly different angle, to "nowhere." Why does he sometimes jump up and down and yell happily, and then shortly thereafter curse and swear? What needs or instincts or drives cause him to move his body in such a jerky, almost spasmodic way? Is this perhaps some special kind of bipolar affective disorder, complicated by hysterical epilepsy? Perhaps we can figure out how to measure it.

When we isolate parts of *interaction* and take them for the whole, it becomes necessary to create imaginary constructs to explain the *things* we think we see. Take for example the notion of "self-esteem." We talk about it as being high or low, and think of it as somehow residing *inside* the individual. And to understand it better we create standardized tests to measure it. Note the physical metaphors: "high," "low," "inside," "measure." This abstract construct which was invoked as a way of explaining observed behaviour and/or described feelings, becomes virtually "real" from Latin *res*, a thing).

"Why is he so abusive?"
"He has low self-esteem."
"Why is she so confident?"
"She has high self-esteem."

These answers tell us nothing.

The abuse of abstraction is rampant in the social sciences. The research on dyslexia is a case in point. In an attempt to make a theoretical contribution to the understanding of learning disabilities, Blackman and Goldstein (1982) invoke the notion of "cognitive style" ("best understood as a hypothetical construct developed to explain the relationship between stimuli and responses"), (p. 106). They state: "We do not know whether learning disabilities are the cause or the result of an individual's cognitive style..." (p. 106). How on earth can an abstraction be a cause of anything? Or an effect for that matter? It *is* a cause of much confusion, and the result of atomistic thinking.

The invocation of imaginary constructs is an attempt to get specific, to try and make sense of what is being observed. The problem is that the researcher gets *specific at an abstract level.* For instance, there is an assumption that dividing a person into imaginary component parts somehow gets us to a more basic, a more primary level.[1] But a person is not a *thing* which can be divided in this way, and the act of division actually moves the researcher to a *more* abstract level.

If we keep chopping up a zucchini, we soon reach a point where it becomes just so much mush. Reified abstractions can be chopped up forever, though it does create a kind of zucchini mush of the mind. Wilhelm Wundt attempted to get down to the building blocks of the thinking process by splitting it into thousands of primary "elements." However, when working at the level of constructs, one can't get *down* to anything.

Imperfectly defined explanatory notions, Bateson noted (1972) that:

> are commonly used in the behavioral sciences—'ego,' 'anxiety,' 'instinct,' 'purpose,' 'mind,' 'self,' . . . and the like. For the sake of politeness, I call these "heuristic" concepts; but, in truth, most of them are so loosely derived and so mutually irrelevant that they mix together to make a sort of conceptual fog which does much to delay the progress of science. (p. xvii)

The problem here is similar to that which I identified above: each of these notions is a label for an imaginary, insular thing. We forget that "anxiety," "self-esteem," and other characterological traits must be understood in context—and that context is *interaction.* Wholeness cannot be divorced from process.

What is the alternative to zucchini mush? It is to isolate not entities, but *pathways of process.* "If you want to understand some phenomenon or appearance, you must consider that phenomenon within the context of all *completed* circuits which are relevant to it" (Bateson, 1971, p. 244). This means looking at both sides of the tennis net, at the relation between the players, at the relation between the observer and the relation between the players, and so on.

The relevant circuits in social science research have to do with the relationships which join people, including the researcher, in meaningful patterns of interaction. For example, in their study of self-fulfilling prophesy in the school system, Rosenthal and Jacobson (1968) challenged the common lineal view that poor children lag behind simply because they are members of a disadvantaged group. The authors didn't go looking for evidence of a genetic basis of I.Q., nor even for social and cultural reasons *within* the child's ethnic group; rather they looked at the

[1] Indeed, Arnold Lazarus has coined the acronym "BASIC I.D." to reflect his particular way of slicing a person into bits.

relationship between teacher expectations and student performance. They hypothesized that

> the child does poorly in school because that is what is expected of him. In other words, his shortcomings may originate not in his different ethnic, cultural and economic background but in his teachers' response to that background. (p. 19)

Their results "indicated strongly that children from whom teachers expected greater intellectual gains showed such gains" (p. 22). A student is only a student in relation to a teacher (or teachers) and thus his or her scholastic ability does not exist independently of the person who is assessing it. This ability is not an objective fact, and any attempt to explain it in isolation will only generate abstract constructs.

Although Rosenthal and Jacobson illuminate the importance of context, they would have to take two further steps in order to make their study truly circular. First, they would need to also consider how student's expectations of the teacher participate in shaping the latter's expectations. Do children who expect the teacher to have high expectations of them do better in school than those students who expect the teacher to have low expectations of them? And second, the authors would have to take into consideration how their own expectations as researchers shape the nature of the relationships they are observing. As Bateson warns us, you can never get rid of the smell of the lab (B. P. Keeney, personal communication, July 9, 1986). In looking for "the pattern which connects" (Bateson, 1979, p. 8), one realizes that it is recursive relationship which is true.

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