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On Reflexivity in Human Communication

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On Reflexivity in Human Communication

My assignment is to talk about reflexivity, reflexivity in human communication (as if there were reflexivity in non-human or technical communication). But in view of the limited time available here and the emotionally involving and intellectually puzzling film we have just seen, I shall limit my contribution to

- (a) a brief typology of reflexivity,
- (b) an effort to wave the concepts into a constructivist perspective on communication (theory), and hope to offer inbetween
 - (c) a few comments on the film we saw.

A brief typology of reflexivity

Webster defines reflexivity as something that "directs or turns back upon itself," as in "he perjured himself," "she knows herself," "they kill themselves." Naturally, examples of reflexivity are given in language and one might be led to believe, as Bertrand Russel did, that reflexivity is a problem of logic, or as grammarians think, a problem of linguistic forms. If either of this were to be the case, it would be easy for discourse analysts to describe the phenomenon and study its implications. Let me start out by teasing out logical and grammatical approaches to reflexivity and come to a more cognitive account that might underlay the intellectually interesting parts of both.

Logical reflexivity. Many textbooks in logic define a reflexive relation as a binary relation R for which it must be true that

xRy implies xRx and yRy,

that is, a relation whose arguments must be capable of having this relation to themselves. So, "married" is not reflexive because neither partner to a marriage can be married to him or herself. "Touches" is not reflexive because, whereas someone could touch himself, he or she can touch a lot of objects that cannot. "Is not taller than" is reflexive because when two objects' heights are compared, each is as tall as it is and never taller than itself.

My problem with the logical definition is that, whenever its strict reflexivity criterion is met, reflexivity turns out to be uninteresting and, where reflexivity seems unsettling, paradoxical and worthy of attention, the logical criterion turns out to be only superficially applicable. For example, the reflexive relations "communicates with" "is comparable to" and "is in the same container as" are true for any pair of objects that can talk and listen (and hence listen to their own talk), share some dimensions (and all when compared with themselves) and fit in any vessel, respectively. At the same time, while the relation "deceives" is said to be reflexive because people who can deceive other people are also presumed able to deceive themselves, on close analysis, the deceiver and the deceived may not be quite the same for

the former knows the truth he or she seeks to hide from the latter, the latter does not and it is far from clear logically how one individual can both know and not know or be aware and unaware of the alleged deception (Champlin, 1988). A strict application of logical reflexivity excludes paradoxes.

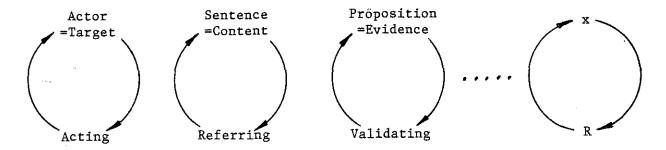
Grammatical reflexivity. The grammatical forms through which logical reflexivity relations (xRx) become what they are have additional problems. "He perjured himself," for example, has the same from as "he killed himself," "he appointed himself president," etc., but perjury means telling a lie under oath and "he perjured himself" is the same as saying "he lied under oath" which does no longer appear to be reflexive. In contrast, "he committed suicide" is an appropriate paraphrase of "he killed himself (intentionally)," no longer is grammatically reflexive without difference in the understanding that someone did something to him or herself that can also be done to others. A slight modification of this assertion shows how misleading grammatical definition of reflexivity can be. When "they kill themselves" is said about gang members in a city, one does not imply that each commits suicide rather that each killer is killed by someone else which has no reflexive meaning at all.

Thus, to uncover reflexivity in discourse, it probably is advisable to move from the surface structure of

grammatical expressions to the deep structure of the underlying cognitions.

<u>Cognitive Reflexivity</u>. As a cognitive phenomenon, I am suggesting to identify reflexivity by its underlying circularity:

(1) There always seems to be an actor doing something to him or herself, a sentence pointing to itself, a proposition containing its own (in)validity, a knower thinking about what he or she knows or does not know, etc. A reflexive relationship is circular. Graphically:



- (2) While the paradoxical nature of reflexivity can be unsettling and disturb other cognitions, (consider how debilitating the command "disobey this command," can be), its origin can be isolated for it is confined to its inherent circularity. Reflexivity is its own cause.
- (3) The reflexive relationship and its arguments change their meaning recursively and adjust them relative to each other. For example, someone who is self-employed may have thought himself to be an employer who hired himself as an employee, but as an employee he must be obedient to himself as a boss, etc. He maybe telling himself what to do then

doing it and finally reporting on it in return, talking in alternating roles throughout. So, a self-employed person could be said to be both employer and employee, but, because he can not fire the employee without ceasing to be his boss, he can not demand a payraise and yield to this demand, etc., he could also be said to be neither employer nor employee. The reflexive use of the relation "is employed by" changes from its conventional meaning to something that recursively accommodates the selves involved which in turn become defined by the recursive operation of (self-)employment. A reflexive relation is constitutive of its own meaning.

With this in mind, let me now suggest three basic ways of handling reflexivity:

self-reflexivity
meta-cognition and
recursive co-construction

Self-reflexivity

Self-reflexivity has many faces. I am suggesting that all boil down to something that is (or fails to be) what it stands for, something that gives evidence for (or contradicts) what it purports or something that does (or fails to do) what it claims to accomplish. An assertion (message, portion of a text or communication) is self-reflexive not because of its logical or grammatical (objective) structure but because someone perceives it to simultaneously convey two related levels of discourse, one

contains and the other is contained therein, one points and the other is pointed to, one demonstrates what the other claims, etc. It is quite possible that someone finds no problem with the notion of someone deceiving himself, with a sign saying "don't read this," or with the statement "I never say never". So, observation and cognition is implicated in the phenomenon of self-reflexivity but does not enter it as a constituent. Let me give just three for discourse analysts perhaps familiar examples and then move to meta cognition and communication.

The most common but perhaps also unjustifiably generalized example of self-reflexivity is <u>self-reference</u>.

A self-referential assertion refers to (or asserts something about) itself.

"This is an English sentence" simultaneously is an English sentence (as every speaker of English recognizes) and asserts that it is. Because of the coherence of the two levels it is unproblematic (and actually totally redundant, semantically).

"This is not an English sentence" is self-contradictory for it is what it denies it is and a reader needs to take sides.

"This statement is false"
entails a paradox for if one accepts the statement as true
one is led to consider it false and if one accepts it as
false one is led to consider it true which closes the

"vicious circle" in which one finds oneself trapped to go around endlessly.

The inability to cope with self-reference as a cognitive phenomenon is longstanding and widespread in our scientific culture. Bertrand Russel's Theory of Logical Types converted this inability into an unwillingness by exorcising the phenomenon from logical-scientific discourse. Indebted to some kind of container metaphor of meaning (a set cannot contain itself as element), Russel's theory sees statements as pointing to, referring to or containing what they are about but only across logical levels and in one direction. Surprisingly, Gregory Bateson (1972) explicitly relied on Russel's injunction by carefully separating communication and meta-communication, content levels and relationship levels of messages, etc., even so Godel's proof provided the first threat to the Theory of Logical Types and Spencer Brown and Francisco Varela even offered solutions to the vicious paradoxes Russel hoped to circumvent.

Evidence of the widespread inability to cope with problems of self-reflexivity may also be seen in my second example. Since J.L. Austin's work (1962), we are familiar with so-called <u>performatives</u>. Performatives are statements the very assertion of which makes them true. "I pronounce you married," said by a priest to two people in front of him changes their status from single to married. "This is an insult," said in response to someone else, makes whatever the other said into an insult from which all other

interactions "naturally" follow. "You are hereby appointed judge," "I think you are a nice guy," "Satanic Verses is a blasphemy" exemplify statements that carry their own truth with them. They may claim to describe something outside themselves but this is unimportant in view of the (intended) fact that they make things happen. They are not primarily about, they constitute reality, a reality that others must live with after the statement has been made.

To constitute is to define from within and to constitute something is to make something consistent with how one choses to talk about it. The film we saw is full of words and images and a large part of it has the effect of trying to constitute what happened. It is our empoverished linguistic notions of content and reference, our inability to cope with the circularities of self-reflexivity, that make us ask questions about whether the interviewees described their reality accurately and, in the face of obvious contradictions, who was right and who was wrong. Questions like this seem to manifest an epistemological trap.

My third example is <u>self-applicability</u> and I take it from the practice of communication research. I think it is fair to say that the mainstream of communication research is dominated by naturalist traditions. In this tradition, scientists seek to discover theory in the empirical evidence available or found (whose validity is taken for granted and thus constitutionally disowned by their finder) and to

generalize this theory to other instances of the same kind. In communication research, the strict separation of data and theory (which may be appropriate in a world, that is unaffected by the knowledge about it, such as astronomy) is confounded by the fact that the subjects observed to be communicating among themselves are not much different from the scientists that observe and theorize about them.

In contrast, I am suggesting: everything said is communicated to someone, self or other. Communication, as object of communication research, takes place in language and largely in the same language in which communication theory is constructed and constituted (published and accepted) in communication with others. Thus, communication theory is not only about communication but also is communication and, because the latter is in the domain of the former, communication theory must be applicable to itself. Accordingly, a communication theory whose delivery (communication to others) contradicts its claim is self-invalidating and ought to be rejected. A theory should always include references to its creator and a theory of human communication or of discourse if you wish should also apply to itself.

Unfortunately, the naturalist belief in the strict separation of theory and data has its corollary in the belief that scientists are superior and neither accountable for their theories to the subjects they claim to describe not required to demonstrate their applicability to their own

practice. It is thus not uncommon that communication researchers carefully construct their argument for and emotionally defend a mathematical theory of cognition that allows the subjects neither to construct their own world nor to emotionally engage in it.

Ruling out self-reflexivity even in discourse about communication creates a schizophrenic world.

The self-reference of assertions, the constitutivity of performatives and the self-applicability of theories are three examples of self-reflexivity that abstract the knower out of their circularity. Let me now turn to meta-cognition in which the cognition of a knower is a constitutive part of the phenomenon observed.

Meta-cognition in Interpersonal perception

Much of meta-cognition is indebted to a mirror metaphor. Its use in describing human perception goes back to Plato and is deeply implanted in folk models of mind as reflective of something real. This is deceptive. While a mirror image resembles what one knows through direct observation, one can never know what direct observations really are other than what one sees. Nevertheless, a mirror is the only device through which one can see oneself and by metaphorical extension can learn who one is. The understanding of individual selves as mirrored through interaction with significant others also is a cornerstone of many social and psychoanalytic theories (Young-Eisendrath

and Hall, 1987), self-awareness being the reflection of the self as reflected in others with the possibility of an infinite regress in levels of cognition, hence metacognition.

Suppose, in the beginning of a couple therapy, a therapist asks his clients to introduce themselves by introducing their partners and thereafter comment on how each had been so represented. The procedure tabs the knowledge each has of the other and, once revealed, it becomes each partner's knowledge about the other's knowledge about him or herself, a meta-cognition distributed in the zig-zag of mutual awareness.

Laing, Phillipson and Lee (1966) who pioneered what they called an Interpersonal Perception Method (IPM) studied the social implications of the interpersonal reflexivities involved. They ask partners three levels of questions, exemplified by the list of questions asked of the husband:

(Direct perspective)

- A. How true do you think the following are?
 - 1. She loves me
 - 2. I love her
 - 3. She loves herself
 - 4. I love myself

(Meta-perspective)

- B. How could she answer the following?
 - 1. "I love him"
 - 2. "He loves me"
 - 3. "I love myself"
 - 4. "He loves himself"

(Meta-meta-perspective)

- C. How would she think you have answered the following?
 - 1. She loves me
 - 2. I love her
 - 3. She loves herself
 - 4. I love myself (Laing et al. 1966:57)

defined four concepts, based on comparisons among answers obtained from them, all related to the empathy each had to the other. These were defined as follows:

Agreement and <u>disagreement</u> arises in comparison between one partner's direct perspective and the other partners direct perspective on the same issue.

<u>Understanding</u> and <u>misunderstanding</u> arises in comparison between one person's meta-perspective and the other person's direct perspective on the same issue.

The feeling of <u>being understood</u> or of <u>being</u> <u>misunderstood</u> arises in comparison between one person's meta-meta-perspective and his or her own direct perspective on the same issue.

The <u>realization</u> or <u>failure of realization</u> of <u>understanding or misunderstanding</u> arises in comparison between one person's meta-meta-perspective and the other person's meta-perspective on the same issue and entails comparisons on all three levels. (Laing et al, 1966:62)

The IPM was reported as having reliably discriminated between "disturbed couples" and "non-disturbed couples," the former by having fewer instances of agreement, understanding and realization of understanding than the latter. The number of studies using the IPM is few but growing (Antaki and Lewis, 1986). A recent study on intra marital fights suggests that couples that are unable to empathize with the others' view on an issue or inadequately assess what the other thinks easily get into "destructive fights" while "helpful fights" are marked by mutually compatible meta cognitions (Goleman, 1989).

According to Miell and Miell (1986) Laing et al.'s work has been criticized (a) as being limited to only three levels of cognition, "direct-", "meta-" and "meta-meta-

perspectives." The generally supported conclusion that subjects can think only very few levels at the same time and get easily lost in apparently meaningless abstractions when asked to imagine responses might an artifact of (b) the exclusive reliance on linguistic responses to a structured instrument, excluding any interaction with the other.

The film we saw is a journalist's story of the interviewees story which includes the stories of other uninterviewed participants and apparently presents no difficulty in understanding. I consider such meta-meta-cognitions quite normal and expect it to be present in ordinary conversations as well.

Recursive co-construction

A viable alternative to the logical level conception in meta cognition regards knowledge not as a static representation (reflection) of something else but as a continual process of making sense of and of creating new experiences simultaneously, of manipulating and at the same time constructing symbols for manipulation or, as Heinz von Foerster put it, as the computation of computation (1981). This recursive alternative to meta-cognition is well established through G. Spencer Brown (1979) and Francisco Varela's (1975) solutions to paradoxes of self-reference, both of which describe the unsettling alternatives of a paradox as a characteristic sequence of events and thus

invented a new form in which reflexive paradoxes have a natural home.

In applying recursive notions to cognition, one may follow von Foerster's (1961) argument which starts with the suggestion that "the logic (of the world) is the logic of discriptions," putting "of the world" in parenthesis, and continues by definition (paraphrased here):

perception = the computation of descriptions
cognition₁ = the computation of perceptions
cognition₂ = the computation of cognition₁
 etc.

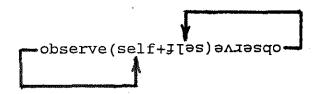
and by serial substitution:

cognition = the computation of computation of...descriptions which, when long enough pursued, will render the origins of the process insignificant, hence:

etc.

Similarly, seeking to understand the reflexive nature of a self recursively, one would probably have little difficulty starting out with the proposition that a conscious self is a construction that arises in interaction between the self and other persons. So, taking "observe" to be the operation embodied in an observer. One could write (Krippendorff 1989):

in which each can be seen as recursively observing or computing their own constructions including the construction of others in them, thus co-constructing each other. In finite form, this double recursion can be depicted as:



Before applying this recursive notion to conversation, let me point out that Laing et al. developed their IPM as a research tool to be applied to a sample of married couples excluding the researcher. Each subject responded in words to the researcher's structured questionnaire and independently of the significant others to which they were asked to refer. Against the relational backdrop that each subject brought to the research situation, the relationships of agreement, understanding, etc. were constructed by the analyst, from outside of these couples' understanding and without these partners present to check on their validity.

Clearly, Laing et al's situation is not much different from us viewing the film of two sets of interviewees, each telling their own stories. As outsiders, we can do nothing but to compare their accounts, to find agreements or disagreements among them and to draw certain conclusions. The common fact is nobody can ever know what "really"

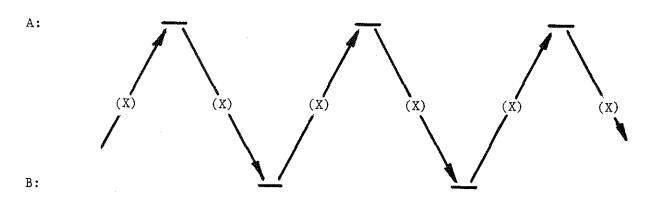
happened. Each constructs and reconstructs coherent accounts of what they individually experienced including who the other was and, since there was little communication among the contending sides as evident in the film, neither included much if any of the others story into their own. We as viewers are now merely responding in our own terms.

To put the scientific observer into the very process inquiry, I am suggesting that this requires

- (i) Taking responsibility (self-reference).
- (ii) Providing for participation in the phenomenon being observed, i.e., allowing the object of description to be constituted by its own description and transformed in the process of describing it (constitutivity).
- (iii) Relativizing the process of observation, i.e., applying the very categories for describing others to the observing self as well, specifically, by not denying others the cognitive capabilities observers claim in constructing them (self-applicability).
- (iv) Seeking recursive accounts for the history of the process of (linguistic) exchanges (discourse), specifically allowing for the self-embedding of own and other's knowledge in accounting for the unfolding phenomena. (Recursive solution to the problem of logical typing).

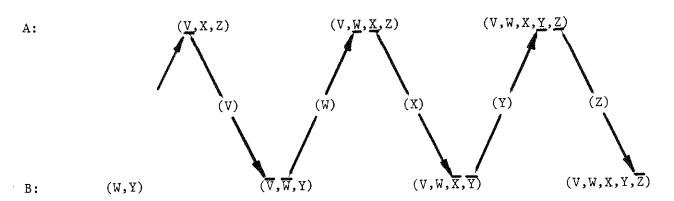
The task is nothing smaller than the development of a recursive theory of communication or a conversational theory of co-constructing reality.

Let me be a bit more formal here and take two individuals A and B and an issue X to start out with. It is fair to say that communication is not like bouncing pingpong balls back and fourth:



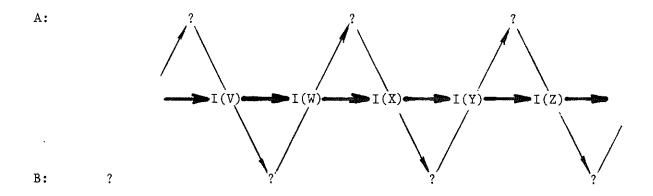
even so I have seen serious researchers describing it that way.

More frequently is the notion that A has knowledge of X and "messages X" to B who then knows X as well. Considering several unevenly distributed topics V, W, X, Y, and Z, a conversation could be conceived of like this:



Here knowledge is seen as objects of sorts that are copied, shipped in some kind of container and reproduced at the receiving end. Thus, each communicator acquires the knowledge another possesses and the process converges toward a state of sharing what initially was distributed. I do think this ridiculously simplistic conception of communication underlies the frequent use of the word "sharing" in every-day discourse and among communication scholars as well.

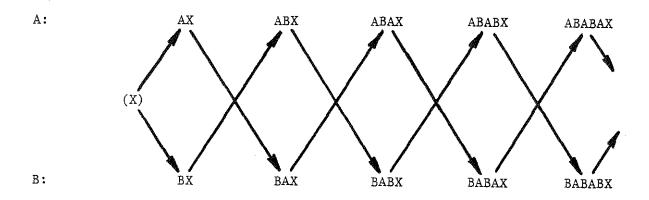
In its most basic form, discourse analysis recognizes that assertions are not what they appear to be and need to be interpreted, thus applying a transformation, say I for interpretation, on them. The approach is correct in ignoring, what cannot be ascertained anyway, the conceptions held by senders and receivers in favor of the text both generate in the process. This non-recursive process may be depicted like this:



The task of interpreting the Vietnam stories we have seen, conforms to this approach and, putting the narrative in order, interpreting their differences in light of what we

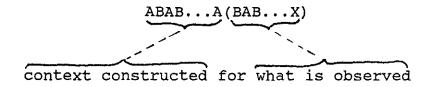
know of human nature, probably is all one can do, given that the analyst can no longer participate in shaping the discourse. (Here, we do not know much about the interviewing situation, editing, etc. either). Two things are worth noting here. First, participants always engage in their own punctuation of the sequence (Watzlawick, et al. 1967). Where one message stops and another starts, how long a conversation stays with the same topic, who responds to what, etc. is arbitrary in principle for outsiders though not inconsequential for participants. Second, an interpretation of something is recognizably different from what this something is, but to talk about interpretation requires knowledge of what is being interpreted. To me this is a difficult if not impossible notion. Some discourse analyst, hermeneuticians and not to forget literary scholars seem to be blind to this epistemological problem by theorizing in this linear manner (without recursion).

Suppose a conversation is not a sequential but a recursive process in which each assertion exchanged is a response to, comment on or about a previous one. Using the two letters A and B now to indicate operations on (or interpretations of) an issue X, which are respectively embodied in the two conversationalists, and, assuming, highly unrealistic as it were, that neither is misinterpreting the other and, even more unrealistically, that scientists can play the all-knowing, equally objective observer, we could see the following dance unfolding:

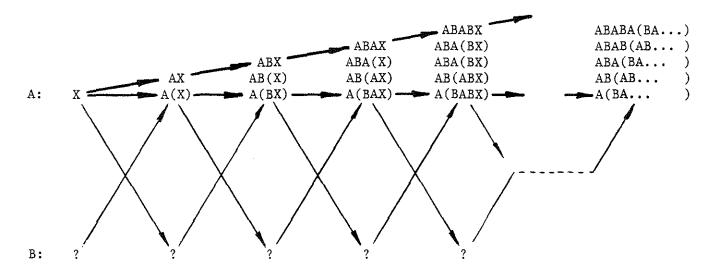


Let me now take the scientific observer, that is myself, to be a participant of the conversation and in the position of individual A, who might be clear as to what he or she stands for, knows or says but can no longer presume to know who B actually is, what B means to say or how B is interpreting what A had been saying. Moreover, putting parentheses around what A sees him or herself as receiving from B or from elsewhere, leaving outside these parentheses A's constructions that place what is seen in the context of his or her own past experiences.

I.e.:



Assuming further that A keeps track of the for him or her "proper" punctuation and history, one can now depict the recursive process the way it might appear to a reflexively aware participant observer, here A, with all of its growing number of observable alternatives:



Here, whether A interprets B as saying (BAX)

[B says how B interprets what A said about X], B(AX)

[B says what A said about X] or BA(X) [B said X],

for example, A has no choice but to rely on the history of

the process to reconstruct the context of his or her

observations, thus always incorporating new experiences into

the past knowledge of him or herself and the other

conversationalist. In principle, the parellel processes:

AX		X
ARAX	and	ABX
ABABAX		ABABX

can continue ad infinitum at which point they become the recursion:

AB(AB)

Thus conceived, conversations recursively generate their own braided history. There are no levels, only the self-generated record of a process that ultimately closes on

itself. Conversational practice may not be so "neat," however. After a short while, what is being said may no longer carry the burden of the whole past into the future. Conversationalists respond selectively and contextualize selectively. New topics may enter and supersede old ones, but, whenever one is perceived as responding to a previous one, recursive sense is made of the connection. With such connections constructed, conversations always appear coherent even when they do not exhaust the recursive depth possible.

Let me now consider three issues concerning understanding and consensus, which, I believe, enter all discourses and their participatory analysis in one form or another.

Laing et al. have shown consensus not to be a simple matter. There are different kinds and each requires comparisons on different levels, or in the recursive account proposed here, at different points in the history of a conversation and within the constructions any one participant employs. I will not repeat Laing et al.'s definitions here but include them in the table below, using the formalism so far developed. They serve as a kind of window that one can think of sliding over the whole history if one seeks to test for any kind of consensus. For example, an assessment of agreement or disagreement requires comparisons between simple assertions, for example, what A believes or knows about X and what A heard B as saying about

X. Realization of understanding requires more complex comparisons that involve a longer history. Whether there are even more complex forms of understanding I do not know. I am convinced though, that consensus does not constitute a "flat"domain.

	AX	ABX	ABAX
A(<u>BX</u>)	A (dis)agrees with B on X	A (mis)understands s B on X	A (dis)agrees to (dis)agree with B on X
A(BAX)	A feels being (mis)understood by B on X	A (fails to) realise(s) (dis)agreement on each other's view on X	A (fails to) realize(s) B's (mis)understanding of A on X

The table depicts ways of obtaining consensus by In ordinary conversations a second issue arises comparison. with assertions like "I agree," I understand you," "I feel being understood" etc. Such assertions give evidence of the participant's ability to make such comparisons and their expression to each other has meta-constructive meanings. For example, if A has asserted X and B expresses agreement explicitly, A can construct B as having made the comparison between (AX) and BX and found them matching. Even so A may never know exactly what B had compared, for example, there could be hidden disagreements in punctuation or unexpected interpretations, the assertion of agreement is a suggestion to move on. Or when B asserts being misunderstood by A, A can construct B as unable to reconcile the difference between what A said about B's view on X and what B really

feels about it. The assertion of misunderstanding suggests to backtrack and reiterate where that difference seemingly arose. Assertions of (dis)agreement and (mis)understanding may never be specific about what is being compared but give evidence of higher-level constructions at work which either participant needs to incorporate in his or her own construction of the other.

The third issue concerns tacit understanding or implicit confirmation. As a constructivist, I assume we have no knowledge about a world outside of our own constructions. We act and talk in concert with them until they get us into unexpected difficulties and are thus disconfirmed. The knowledge that all conversations generate about other participants always entail expectations about how they would respond to ones own assertions and dispositions regarding how one is likely to act towards them. When A says X and interprets B's response as A(BAX), that is, as his or her assessment of B's interpretation on what A said, if B's response falls within the domain of A's expectation, is explainable from A's construction of B, then A may assume to at least tacitly understand B, but will have to modify the construction of B if B's behavior comes to appear odd.

There also is the possibility of conflicts, for example, when A hears B as disagreing with what A said while conforming with how A expects B to respond, or agreeing with A while not conforming with A's expectations of B. A is

then forced to explain the experienced conflicts which means finding recursive transformations of his or her observations that modify the construction of the other.

Finally, I want to point out that the recursive depth of discourse, the level of mutual understanding achievable within it, always is a matter of cooperation and of continuous challenge. It is difficult to construct recursive models of a discourse that essentially consists of a sequence of unrelated assertions. For mutual understanding to become experientially manifest, discourse must include several recursions of selves and others. Situations that make this difficult, like the two parties during the war in Vietnam, or when one party is unwilling or incapable of reflexive constructions, understanding about others will remain shallow and unsatisfactory as is well known in marital discourse (Goleman, 1989). To exorcise reflexivity from social science theory and methodology is equally disastrous to human understanding of human beings. The fact that our constructions of each other have their own lives, are subject to evolutionary transformations, and thus constantly undermine any once achieved understanding makes the construction of appropriate theories of discourse and communication a never ending challenge.

References

Antaki, Charles and Alan Lewis. <u>Mental Mirrors</u>. Newbury Park, CA: Sage, 1986.

Austin, J.L. How to do things with Words. New York: Oxford University Press, 1962.

Bateson, Gregory. <u>Steps toward an Ecology of Mind.</u> New York: Ballantine, 1972.

Champlin, T.S. <u>Reflexive Paradoxes</u>. New York: Routledge, 1988.

Foester, Heinz von. Observing Systems. Seaside, CA: Intersystems Publications, 1981.

Godel, Kurt. On Formally Undecidable Propositions of the Principia Mathematica and Related Systems. Translated by B. Meltzer. Edinburgh, Scotland: Oliver & Boyd, 1962.

Goleman, Daniel. Want a Happy Marriage? Learn to Fight a Good Fight. New York Times: pages, C1 & C6. February 21, 1989.

Krippendorff, Klaus. On the Ethics of Constructing Communication in Brenda Dervin, Lawrence Grossberg, Barbara J. O'Keefe & Ellen Wartella. <u>Rethinking Communication</u> ... <u>Volume 1 Paradigm Issues</u>. Newbury Park, CA: Sage, 1989.

Laing, Ronald D., H. Phillipson and H.R. Lee. <u>Interpersonal Perception</u>. London: Travistock Press, 1966.

Miell, David K. and Dorothy E. Meill. Recursiveness in Interpersonal Cognition. Chapter 3 in Charles Antaki and Alan Lewis. Mental Mirrors. Newbury Park, CA: Sage, 1986.

Spencer Brown, G. Laws of Form. New York: Dutton, 1979.

Varela, Francisco. A Calculus of Self-Reference.

<u>International Journal of General Systems</u>, 2: 1-25, 1975.

Watzlawick, Paul, Janet Helmick Beavin, Don D. Jackson.

<u>Pragmatics of Human Communication</u>. New York: Norton, 1967.

Yong-Eisendrath, Polly and James A. Hall. <u>The Book of Self.</u> New York: University Press, 1987.