4

A Recursive Theory of Communication

Klaus Krippendorff

Introduction

This is an essay in human communication. It *contains* 'communication', *mentions* and is, hence, *about* communication, but, what is important here yet often overlooked in other essays, it also *is* communication to its readers. This exemplifies that no statement, no essay and no theory can say anything *about* communication without also *being* communication to someone. Among the scientific discourses, this is an unusual fact – fact in the sense of having been made or realized – and I suggest it is constitutive of communication scholarship that its discourse is included in what it is about and, therefore, cannot escape the self-reference this entails. If I had to formulate a first axiom for communication research I would say that to be acceptable,

Human communication theory must also be about itself.

Although this seems obvious, I understand that many writers on the subject do not recognize this axiom and talk about communication as if their own use of language had nothing to do with communication. I suspect the reason for this omission lies neither in bad intentions nor in an inability to understand this phenomenon, but in the unquestioned commitment to certain ontological assumptions and vocabularies that in effect prevent these scholars from facing *themselves* in their own constructions.

For much of the history of science, self-reference and the paradoxes it entails have been treated like an oddity of logic and a source for amusement at dinner-table conversations among intellectuals. Indeed, whether or not Epimenides the Cretan lied when he claimed 'all Cretans

are liars' left much of the world around him unchanged. Bertrand Russell was the first, I believe, to recognize the seriousness of such paradoxes.[1] However, instead of coping with their 'vicious circularities', he invented *the theory of logical types* in order to completely ban self-reference – and its relatives, reflexivity and circularity – from scientific discourse. I contend that this ghost still haunts scientific theory construction, and if self-reference indeed is a defining feature of communication scholarship, it hurts the understanding of human communication especially.

This essay seeks to resurrect self-reference in understanding human communication. To succeed, it has to find an antidote to the Russellian Ghost. I believe this can be found in a *recursive conception for human communication* and in conceiving social scientific inquiries into communication as being accomplished *in* human communication. This is a project that Margaret Mead initiated by suggesting that cybernetics be applied to itself; that Heinz von Foerster defined as a shift in the focus of attention from what is observed to the process of observing; that Lars Lofgren understood as a search for a type-free logic or autology; that Ernst von Glasersfeld sought to realize in his radical constructivism; that Malcolm Ashmore and colleagues pursued in the name of a reflexive sociology; and that Anthony Giddens recently acknowledged in the reflexivity of socially knowledgeable agents.[2]

The reflexivity that needs to be pursued will, I am convinced, usher radical changes in understanding human communication and attendant social phenomena. However, all I can do here is take a few steps: one is towards a recursive theory for human communication; and the second is to explore how an established social theory looks in comparison.

Towards a recursive theory, I will add two propositions for understanding of communication to the above and articulate a few of its corollaries. By 'theory' I do not mean one that can be fed into a computer to yield valid predictions about events *outside* its embodiment. Social theories arise, as all theories do, *within* a social fabric, constitutively involving human beings capable of inventing and articulating them. But social theories, in contrast to natural scientific ones, may also re-enter their social fabric and become *embodied in* the very practices of knowledgeable human agents. Thus a (social) theory for human communication has to acknowledge the understanding that practitioners of communication have of it; provide spaces for their individual participation; and inform those involved about the joint consequences of their practices. I am saying 'theory *for* . . .' to indicate this enabling quality. 'Theory *of* . . .' would limit it to a representation.

As the established theory, I will take parts of Giddens's recent work.[3] Giddens does not claim to be a communication theorist, nor is he concerned with epistemology, so taking his conceptions as an example might

seem unfair. However, since he takes knowledge and human agency as his primary focus and, unlike most social scientists, builds reflexivity right into the centre of his social theory, I will conclude this essay by showing the space a fully reflexive social theory of communication can offer the inquiring scientist and the practising communicants.

The Centrality of Understanding

To guide the argument towards a recursive theory for human communication let me suggest my second proposition:

> *Everything said is communicated*
> *to someone understanding it as such.*

The explicit self-reference in this proposition, the 'as such' pointing back to 'everything said', is important here. It locates saying things and communication *within* someone's understanding. Substantially, the proposition asserts that anything is what it is because someone understands it that way; that the judgement of whether something is real or true always is someone's judgement; and that communicating things cannot exist without someone's cognitive participation. Theories of communication may be written on a piece of paper but they exist only in someone's under-
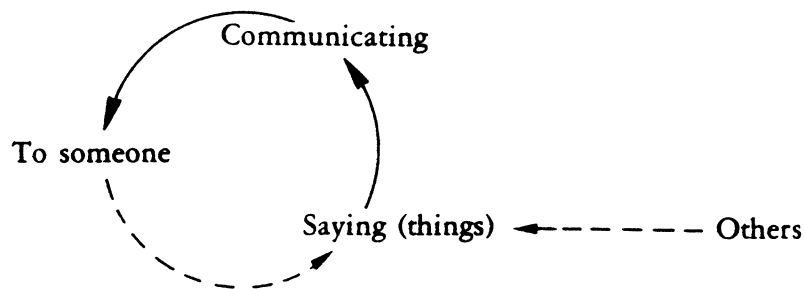

Figure 4.1   Someone's understanding

standing. This proposition might be depicted as in figure 4.1. By 'saying', I am not restricting communication to spoken communication; obviously one can *say* things in pictures or communicate in gestures or by touch, involving no language at all. Neither am I suggesting that 'saying' must originate in other speakers. Although conversation with others is proto-typical of human communication, speakers too must understand their speech and monitor their own practices. Humberto Maturana's formula 'everything said is said by an observer' focuses attention on humans as being both speakers *and* observers.[4] My proposition merely adds *human understanding as constitutive* of what (if anything) is being said.

The proposition could be seen as reformulating Watzlawick, Beavin, and Jackson's admirably simple first axiom of communication: 'One cannot not communicate.'[5] This suggests that all features of human behaviour, sounds and silences, the mailing and the not mailing of a letter are meaningful (which I would qualify by adding 'to someone'), that even a deliberate effort not to engage in communication reveals itself as such, and hence communicates something. This axiom admits the powerlessness of speakers or actors to control the meanings their (discursive or non-discursive) practices have for others, but gives these others no credit in determining what this means to them. In contrast, my proposition is stated from the position of a listener or observer who always controls his/her understanding within the constraints of his/her cognitive abilities. Indeed, Watzlawick and colleagues' axiom necessarily fails when communication is directed to or withdrawn from someone unwilling or incapable of understanding what is taking place in terms of communication.

My second proposition is intended to overcome the Cartesian dualism which manifests itself in the distinction between what something *really* or *materially* is, a text for example, and its *subjective interpretation* or subject-dependent meaning. This counters any suggestion that one can *see* a text prior to *seeing it as such* and then explain it as a cause of one's perceptions or interpretations, as if the dualism implied in this distinction resided outside of an observer's metaphysics. Whatever gives rise to the awareness of something being said and communicated, the causes of one's experiences, must be located *within* one's horizon of understanding.

This inaccessibility to understanding of its external causes does not mean that understanding could not be extended to embrace something heretofore unknown. For example, TV viewers see sharply contoured and moving images on their screens. Yet a magnifying glass applied to the screen will reveal independently flickering but otherwise stationary dots of light. The correlation between the two views may be suggestive of what a magnifying glass does relative to how perception works, but any explanation of this correlation links two kinds of experiences, not an objective (pre-experiential or observer-independent) cause of one. *There is no escape from one's understanding.*

Nor does it mean that understanding is wholly subjective and free of circumstantial constraints. For example, Giddens describes 'knowledgeable agents' as continuously monitoring what they do, turning certain consequences of their actions into information which potentially challenges and revises the knowledge that directs their future actions.[6] This describes a reflexive loop which is so constituted as to remain viable. It is guided by knowledge that is in turn constrained by the re-entering in this knowledge of the practical consequences of the agent's actions as they
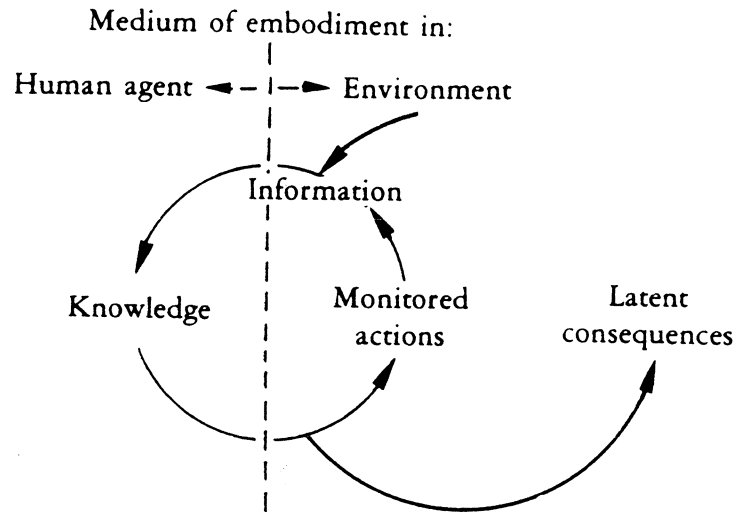
Medium of embodiment in:

Figure 4.2   Giddens's construction of a knowledgeable agent

have passed through his/her environment. Figure 4.2 depicts an abstract version of my reading of Giddens's construction.

In constructing knowledgeable agents this way, Giddens maintains a position outside his agents. In figure 4.2 this is indicated in the episte-mological status assigned to 'latent': what remains unintended and unseen for the otherwise knowledgeable agent becomes the consequences of that agent's being and acting for the observing sociologist. My proposition implies that the latter takes place in an observer's (Giddens's) under-standing and that this too is a construction involving social subjects, their monitored environment, and its unfolding into latent consequences of their actions. To capture this, figure 4.3 embeds an observed subject's
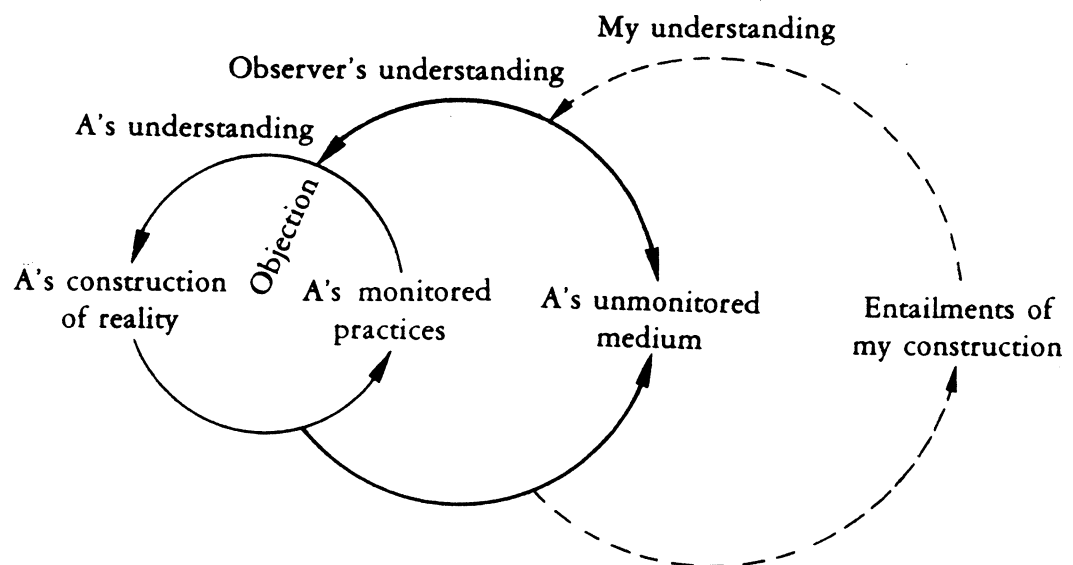
Figure 4.3   An observer's construction of someone's understanding in the medium of the observer's own understanding

understanding in the understanding of its observer, such that each involves both a construction of reality (knowledge) and the practices that derive from it.

Herein understanding is constituted in a reflexive loop, in the unfolding of one's reality construction into one's practices and their re-entry into the very constructions from which they were derived. What enter a reflexive loop are not physical stimuli, things, or messages as seen by an external observer, but challenges to or constraints on someone's understanding. I will call these 'objections' from the medium of a loop's embodiment. *Objections* 'say no' to someone's construction of reality when the expectations that derive from a construction are incommensurable with the experiences resulting from one's actions. A medium, by definition, provides the background of one's reflective monitoring and hence is outside the horizon of that person's understanding. It includes what an outsider may conceptualize as latent consequences; as the work of the unconscious or other biological phenomena; and as the co-presence of extra-individual events. A reflexive loop is always 'meaning-tight', 'informationally closed', or 'hermeneutically impenetrable'. This suggests a major difficulty in conceptualizing communication among reflexive practitioners in which their understanding is constitutively involved.

Note that my proposition does not use 'understanding' representationally. Comprehension is always *of* something and invokes the norm of a privileged observer external to a reflexive loop, such as the correct interpretation of a text or the accurate decoding of an encoded message – wherein the Russellian Ghost is again evident. In contrast, understanding simply *is*. I assume that its norm is set by the knower himself: the comfort of seeing oneself involved with something said or experienced; the confidence in the viability in practising one's constructions of reality; the certainty of continued participation in a community of others, etc. This understanding should not be confused with the one in Alfred Schutz's phenomenology, which is entirely subjective and not embedded in a reflexive loop constitutively involving an unknown medium.[7] Thus the assertion 'I understand (you)' can hardly mean comprehending what someone else had in mind when saying something, but might be taken as indicating a sense of coherence or closure of one's state of knowing and as a signal marking the readiness to proceed in a conversation. This is similar to Wittgenstein's notion of understanding a sequence of numbers, expressed in the exclamation 'now I can go on'.[8] Conversely, lacking understanding almost invariably signals a state of not being in touch with another, or a strangeness that ethnographers after Martin Heidegger have called 'breakdown'.[9] In a technical context this is referred to as 'perturbation' or, as I call it, 'objection.'

Ultimately, my proposition claims humans to be *cognitively autonomous*.

In support of this claim I submit that:

1 *Nobody can be forced to understand* something as intended, as it exists or as it should be from someone else's perspective.

2 *Nobody can directly observe or access someone else's understanding* (its inference from observed practices, both discursive and non-discursive is always one's own).

3 The reflexive circle involving the repeated construction, de-composition, and re-construction of realities, the continuous enacting of these constructions into practices, the re-entering of the consequences of such practices into the very reality that justified them initially is *dedicated to preserve human understanding* by criteria internal to the process.

4 Understanding is *never finished*, even in the absence of objections from an environment. The process *directs itself*.

For me, understanding can neither be abstracted out of the medium of its embodiment as logical positivists routinely do, nor can it be reduced to an individual's biology and/or environment, as behaviourists insist upon. Only by reference to the medium of its embodiment can one see how *objections* (perturbations or breakdowns) limit the space within which understanding is arbitrary and free. Fatal accidents and suicides exemplify the fact that individuals have the cognitive autonomy to construct realities whose practices can become biologically non-viable. Under such extreme conditions understanding destroys itself via its embodiment. It follows that the persistence of one's understanding in time indicates not a state of adaptation to an environment, but rather that one's constructions of reality as invented and practised have stayed within what its unknowable medium of embodiment afforded. Thus cognitive autonomy can reach beyond the biological autopoiesis that embodies it, but in the long run *understanding cannot violate its own embodiment*.

A Recursive Construction for Communication (theory)

In view of the foregoing, I cannot write about communication without reminding myself that I am also practising communication at the same time, that communication cannot reside entirely outside or independent of my understanding, and that my cognitive autonomy grants me considerable freedom in constructing other fellow beings as participants in the process. Particularly, I cannot subscribe to notions of communication whose practices are predicated on denying others, readers or partners in communication, the kind of cognitive abilities the preceding proposition claims. This brings me to my third proposition:

*Human communication constitutes itself
in the recursive unfolding of communication constructions,
held by participants (including of each other),
into intertwining practices that these participants can
recognize and explain in terms of being in communication.*

This proposition locates constructions of reality and individual practices (that is of communicating and saying things) in some participant's understanding. But it goes beyond the second proposition by asserting that communication arises in the *concurrent unfolding* of communication constructions, simultaneously held by its participants, into intertwining communication practices. Each reflexive loop, each individual's understanding here becomes potentially challenged by the consequences of other participants' practices. These practices could be said to be in co-ordination when the joint practices no longer challenge or object to each other's unfolding reality constructions, when they are viable relative to each other, or when understanding 'resonates.' Figure 4.3 can be expanded as follows to depict this part of the proposition.
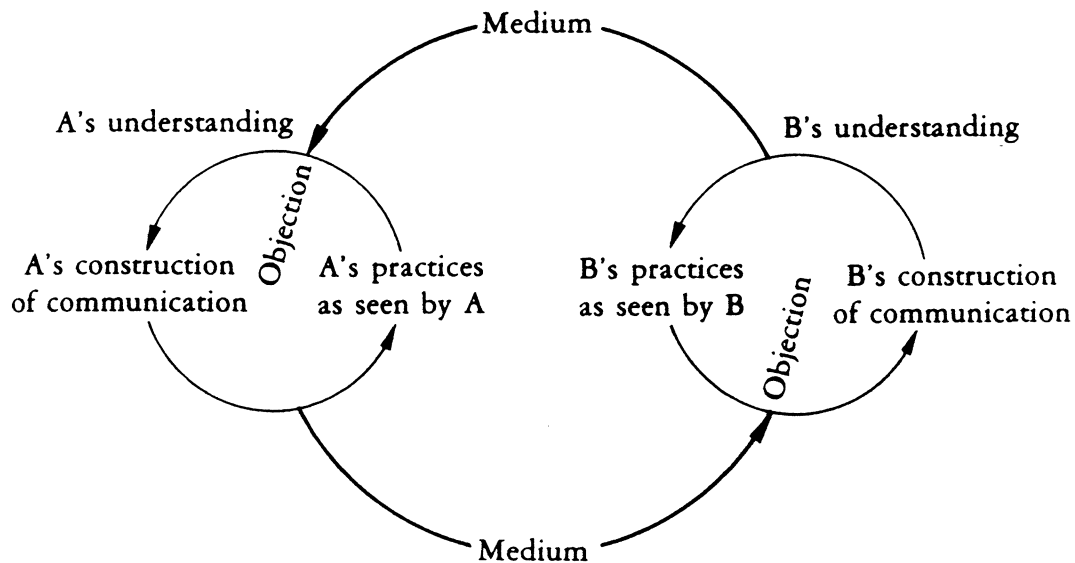

Figure 4.4 An observer's construction of communication between others

Figure 4.4 fundamentally differs from diagrams commonly used by communication researchers who investigate what A says to B, what B says to A, and how the whole sequence develops. Such researchers take their own understanding as the only understanding that matters. Their research does not make allowance for others' understanding and thus only inquires into their own. My second proposition suggests that an external observer might well explain what challenges or objects to the reflexive loop

involving someone else, but that this observer's description cannot enter as such into the understanding of the observed. Consequently, figure 4.4 does not suggest that whatever A hears himself as saying, A's practices, corresponds to what B hears A as saying. Both communicants have their own understanding, generate their own ideas about what they hear the other saying, provided it remains viable in the presence of the other's practices. The constructions of communication that do emerge in such a process must accommodate the objections they pose for each other – through their continuous unfolding in intertwining practices. Coordination simply is intertwining as understood by those involved.

While figure 4.4 seems superficially fair to both communicants, the diagram demonstrates how ignoring my first proposition necessarily privileges the vantage point of an external observer or reader. Indeed, the figure indicates no problem in describing what A and B (mean to) say to each other – and enables a viewer to assess, for example, their cognitive sharing, their misunderstanding, the accuracy of transmission. But all of these privilege that outside observer's norms, while denying the observed communicants the like ability to access each other's meanings, and also their observer's construction of them, as shown in figure 4.4 This privileging of an external or objective observer is once again a trace of the Russellian Ghost. In contrast, the symmetry in my proposition avoids making epistemological exceptions, either for the communicants involved, or for their scientific observers.

Secondly, this proposition realizes human communication as a *social phenomenon*. Social phenomena like culture, institutions, conventions, language, and human relationships are all constituted in the understanding participants have of them. By 'constituted' I mean defined from *within* the processes being defined, which is a reflexive phenomenon that makes observation by outsiders difficult. Berger and Luckmann recognize this issue to have far-reaching implications when they argue that since an 'institutional order can be understood only in terms of the "knowledge" that its members have of it, it follows that the analysis of such "knowledge" will be essential for an analysis of the institutional order in question'.[10] Giddens also acknowledges this by giving 'knowledgeability' a defining role in his construction of social agents.[11] But neither has an answer to the question of how such knowledge can enter social processes, much less processes of human communication.

My third proposition does not merely echo the importance of such knowledge in understanding human communication, it spells out a *recursive form* that incorporates into this understanding the very understanding communicants have of communication. My proposition thus no longer conceptualizes those involved in communication as observers of social events outside of themselves (a position into which the viewer of

figure 4.4 is thrust) but as co-creators of the very social phenomenon of communication in which they participate. This is an important deviation from traditional conceptions of communication as the sending and receiving of mutually known messages, symbols, or meanings, of social phenomena as shared, and of facts as objective and observer-independent, decided by someone outside the phenomenon in question. To avoid objections/breakdowns in the reflexive monitoring of one's part in the intertwining communication practices, it becomes natural:

1 that one invent others in one's own construction of reality;
2 that these invented others are equally able to understand the unfolding of their own reality constructions into their own practices and to monitor them in their own terms;
3 and that these others can understand the co-ordination that arises in terms of their respective conceptions of communication.

Figure 4.5 depicts an individual's (A's) *minimum* understanding of his or her communicative involvement with another (B) – *minimum* in the sense
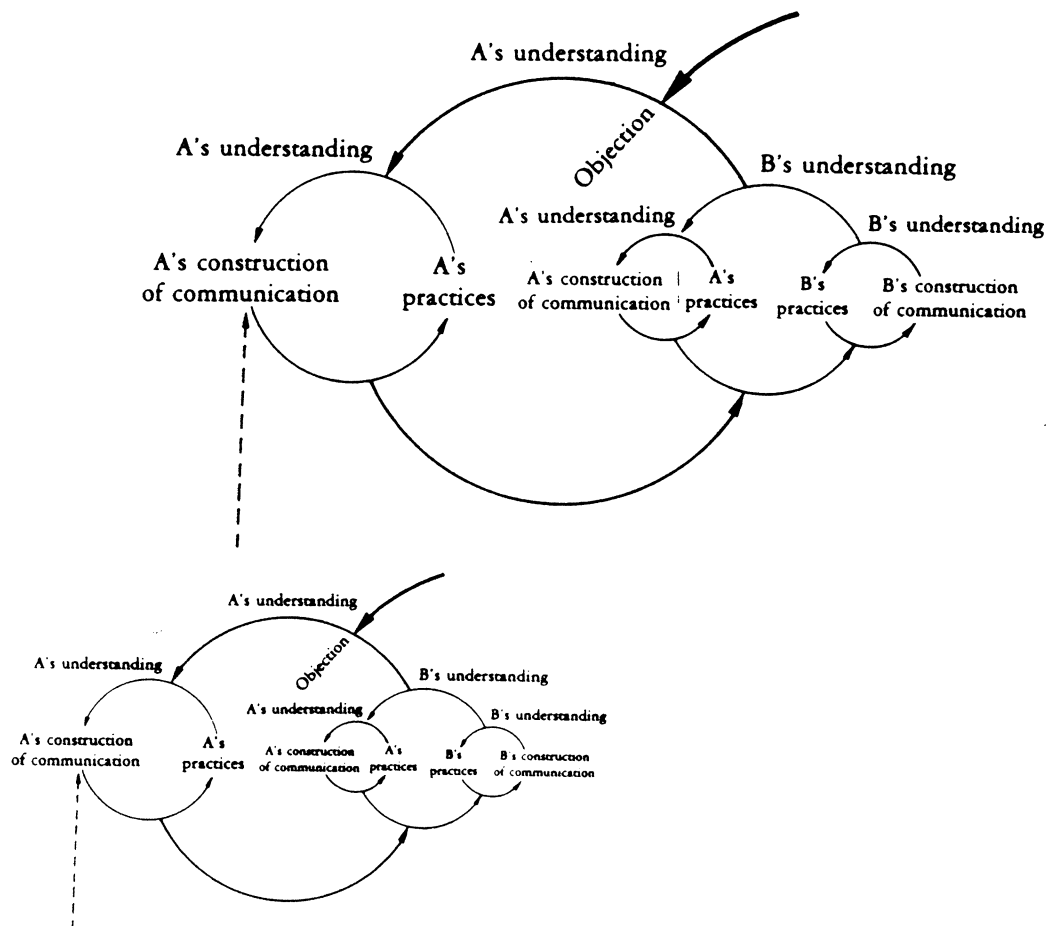

Figure 4.5 A's (minimum) construction of communication

that the embedding of constructions into each other may have greater recursive depth.

In this figure, communication does not appear as a variable to be entered into an equation. As a social phenomenon, it is constituted in a reflexive practitioner's understanding. Nor does communication require mutually shared knowledge.[12] Rather, it is depicted here as a construction that constitutively involves one's own and others' understanding, including these others' understanding of their own and their others' understanding, etc., which comes back to one's self but from these others' perspectives. Individual differences in understanding communication are considered natural rather than deviant from some outsider's theoretically motivated norm.

This conception for communication is a recursive one, applicable to itself. Appropriately, figure 4.5 includes at least one reference to itself. 'A's construction of communication' on the left side of the diagram refers to the diagram as a whole, rendering the whole as its own part. In practice, such a recursive conception for communication is *fractal*-like extendable – without involving the Russellian Ghost. Naturally, a diagram with greater recursive depth would exhibit many more such self-references. Although this may seem unsettling to readers with strong preferences for linearities, the difficulty may stem from not being able to envision a space in which apparent part-to-whole relations become recursive constructions of unities. The two dimensionality of paper seems to be an awkward medium to depict a recursive construction of communication.

Communication researchers who consider their interaction with subjects as a social phenomenon, as they should, can recognize in figure 4.5 a theory of themselves that can be recursively extended to embrace the understanding of those whose communication practices they theorize. In practice, though, people are not able to keep track of very many levels of recursion at the same time (see a review of R. D. Laing's work by David and Dorothy Miell).[13] However, the realities of such cognitive limitations should not serve as an excuse for altogether ignoring recursive accounts of social phenomena, as many social scientists do.

For example, a candidate for political office who knows what voters think about her – and what they know about how she thinks of them – is likely to be a better communicant than one who merely knows how many know her. Understanding human communication as a social phenomenon requires adequate recursive depth at least equal to the understanding of those communicated with.

Thirdly, *language* is constitutively involved in any recursive construction for communication. This is not to deny the possibility of non-linguistic phenomena entering processes of communication. For example, consider

human communication with pets. Pet owners often create elaborate constructions of what their pets can understand, usually including their pets' ability to understand their own intentions in talking to them. Aetiologists are likely to dismiss the attribution of this ability as mere anthropomorphic projections. However, as long as such constructions of communication remain viable in the practices they inform, the owners' accounts of how they communicate with their pets has to be respected as an explanation of what they do and experience. The therapeutic value of practising such constructions is unquestioned. The fact that humans, including aetiologists, do not have the faintest evidence of how non-human animals see their world (notwithstanding Uexkuell's gedanken-experiments[14]) gives pet owners considerable liberties to invent one for their pets without expecting expressions of dissent. This disparity demonstrates the central role of language in human communication. Pet owners can explain to each other – as the propositions imply – their constructions, including those of their pets' reality; pets cannot.

It is too easy to equate communication simply with language use and thereby exclude practices grounded in what Michael Polanyi (1969) calls 'tacit knowledge', what Giddens describes as 'practical consciousness' and what Mark Johnson analyses in terms of 'non-propositional meanings'.[15] It is not sufficient to rely on such otherwise agreeable metaphors as in Heidegger's saying that: 'language is the house of Being' (or the house we live in).[16] The fact that human communicants (even pet owners) can be held socially accountable for their actions,[17] and can offer verbal explanations, clarifications, justifications, even whole theories of their realities, undoubtedly demonstrates that language is part of the very construction of communication that unfolds into social practices. Here communication can be said to be *constructed in language* while being practised (see my first proposition) and thus involves not only the coordination of practices (as in communication with pets) but also the coordination of that co-ordination.

While I cannot get too deeply into the many roles languages can play in communication, I want to emphasize three implications:

1 Language cannot be regarded as being *about a world outside* its speakers, as representative of objective facts, or as a conveyor of information. Since everything said must be understood as such, meanings always reflect a speaker's cognition, feelings, experiences, intentions, and constructions of reality. Tropes such as substitutions, categorizations, metonymies, and metaphors, which do not play important roles in conceptions of language as a medium of representation, are seen here as indispensable windows into a speaker's or writer's process of re-ception, re-cognition and re-construction of realities.

2 By the same token, language cannot be considered *shared* in the

sense that some linguistic forms (as identified by an external observer such as a linguist) have the same meanings for all speakers of that language. This does not prevent language from being used as a medium of coordination of communication practices. Austin's *performatives* or Searle's *speech acts* (for example, declarations, promises, questions, apologies, greetings) may not express much about a speaker's cognition but they do create what they assert and commit participants to particular communication practices. Gregory Bateson's message 'this is play' shows that language provides speakers with the ability to coordinate how they shift from one socially constructed context to another.[18] Coordination surely is a more appropriate explanation of the use of language than sharing.

3   Language use is not *governed by abstract rules* but by speakers' discursive competence – which may include the understanding of some such rules and their histories. Rules of language are invented to account for various aspects of human speech: in the linguistic tradition, primarily for the generation of well-formed sentences; in the speech-communication tradition, for the evolving relationships among speakers, etc. But such rules are also stated in language, are communicated among the users of that language, and may hence become constituted in the very language used in human communication. Thus rules cannot be separated from the language they are assumed to describe. Here, language is no longer a medium of coordination of something else but it coordinates itself in the understanding of its rule-knowledgeable users. The foregoing three points suggest that language is a prerequisite of understanding communication as a social phenomenon, hence 'everything said ...'.

Fourthly, my third proposition neither *preconceives a particular theory of communication* nor does it require participants in the process to agree on one. By not specifying from the outside or in advance of an encounter with others what communication is or how it should be understood by those involved – whether as conveying knowledge, reproducing pattern, maintaining relationships, exerting influence and control, negotiating meanings, cooperating in the consensual pursuit of goals, etc. – this proposition provides no more than a recursive *frame whose space can be filled* by any construction participants happen to bring to it or develop in the process of communicating with each other. It provides a scaffold that invites practitioners to invent and try out their own constructions relative to each other. And it invites scientists not only to observe but also to listen and respond to accounts offered in communication. The open yet formal nature of this recursive theory *for* communication might be alien to traditional social scientists accustomed to formulating disembodied theories *of* communication that predict or control observations, without realizing their own hermeneutic participation in what is always a social process as well.

As stated, the propositions are neither true nor false in the representational sense. I do believe that humans, at least I, could accept living with mutual respect in the spaces this recursive theory provides – and the ability to live in this space would speak for its social viability. For inquiring scientists, one methodological implication is that it offers conceptual spaces in which observed forms of communication can be explored relative to those that do not occur in practice. For the theorized, it provides spaces for participation and respecting each other's contributions in the social construction of theories concerning them. One could say that the propositions 'socialize' communication theory construction but without ideology or idealism – for they can potentially embrace markedly unequal but *mutually acceptable* forms of interaction such as human communication with pets, or where one participant claims privileges as a superior scientific observer and the other willingly accepts the inferior role.

Fifth, and finally, knowledgeable human agents have the ability to move within the virtual space of their known. Specifically, this entails the ability:

1 *to position* themselves in their own constructions of reality which, in the case of communication, must include (a population of) other human beings;
2 *to move* their position into their constructed others' constructions of reality; and
3 to *see or understand themselves through these others' eyes.*

This goes far beyond recommending, for example, that a politician should keep his or her voters 'in mind' although this is where the awareness of human communication starts. The proposition takes knowers as part of their known – and communication as involving others with similar capabilities to construct themselves, other fellow beings, their knowledge, their perceptions, and their motivations. Without the ability to construct others, communication would be reduced to a monologue, to a performance for an audience, or to the mere 'production' of messages as mass communication is often and inadequately described. Without the understanding of others, the intertwining of practices would not be explainable and society would reduce to a mechanism. Without the ability to appreciate the often astounding differences in others' understanding, empathy and love could not arise and creativity would be stifled by norms imposed from the outside. Without the ability to explore the constructions others have of themselves, one would not be able to understand oneself. Also, one would not be able to pull oneself out of one's cognitive traps whose nature can be realized only from another's perspective,[19] which in

my view is a fundamental requirement of all *emancipatory pursuits*. My recursive theory for communication supports this possibility.

To be clear, there is no way of escaping one's horizon of understanding. This is what positivists have tried to do only to find themselves entangled in epistemological contradictions and struggles for authority. Neither is it possible to enter someone else's understanding and assess commonalities and differences between them. This is what many popular theories of communication-as-sharing assume. To make sense out of one's own practices of living with others and to sustain one's own understanding while respecting the cognitive autonomy of others, recursive constructions of reality inevitably suggest themselves. Such constructions are inconsistent with the idea of a single *uni-verse* and instead support a *multi-verse of radically distributed but coordinated constructions* of reality continuously unfolding themselves into the *mutually non-challenging* practices of cognitively autonomous beings. To me, communication is nothing less than an effort to understand such an unfolding.

Communication in Giddens's Society

Any social theory, if accepted by social practitioners, will have social consequences commensurate with what it claims to be about. A sociological theory should address this reflexivity and I take this to be Anthony Giddens's primary aim.[20]

I read Giddens's *Constitution of Society* to be wholly in agreement with my recursive theory for communication in two respects: first, in his construction of humans as knowledgeable agents; and secondly, in his inclusion of the observing social scientist within his conception of society. Both locate reflexivity at the centre of social theory construction.

According to Giddens, humans demonstrate their *knowledgeability* in two ways: first, in their ability to monitor their actions, receiving information about the consequences of their actions, adjusting their knowledge accordingly, and having reasons of their own for being so engaged; secondly, in their ability, if asked, to account for the nature of their actions and elaborate (or lie) discursively upon their reasons for them. Giddens terms these two abilities *practical* and *discursive* consciousness, respectively.

Giddens is unique among sociological theorists in *including social scientists* into his theoretical concerns and granting them, as well as the social actors they describe, similar reflexive capabilities. Accordingly, social actors are able to engage each other discursively about their practices, much as sociologists do with their professional peers. They can also construct their own social theories within their domain of experiences and thus become sociologists, on the level of their discursive consciousness;

and methodological specialists, on the level of their practical consciousness.

Since Giddens is not a communication theorist, it would be unfair to criticize his work from a perspective alien to his. However, because knowledge plays such an important role in his constructions, issues of interest to communication scholars are implicated almost everywhere. It is therefore instructive to see how Giddens conceptualizes communication and wonder whether recursive constructions could add to his programme. In this effort, it would be equally counter-productive to cite disconfirming evidence or to raise questions of validity – for this would bring me back to the very competitive and objective stance I tried to leave behind by proposing a recursive theory for communication and other social phenomena. The following, therefore, are merely intended to ascertain the spaces that these conceptualizations provide for social scientists to explore and for social practitioners to occupy.

I shall limit my comments to five intersecting issues between Giddens's sociological framework and communication theory: (1) positioning oneself and Giddens's double hermeneutic; (2) taking the linguistic turn seriously; (3) acknowledging one's cognitive involvement; (4) communicating communication; and (5) considering ethical consequences of constructing social theories.

Positioning oneself and Giddens's double hermeneutic.   While Giddens grants all humans a measure of knowledgeability and reflexivity, he conceives the sociological project as a collective effort by social scientists to observe, describe, and theorize the social practices of actors and the structures that emerge as a consequence of these practices. Social scientists, he observes, enter a social situation already conceptualized by its human constituents and must therefore invent second-order concepts that account for the knowledge and conceptions ordinary actors already bring to a situation. According to Giddens, a sociological language capable of second-order conceptions is thus necessarily more abstract and has the logical status of a meta-language (a term fundamental to Russell's theory of logical types) relative to the language that actors use to express their knowledge to each other. Categorizing the separate reflexive monitoring by each, Giddens calls the process by which social scientists let their theoretical knowledge guide their inquiries into how ordinary actors let their practical knowledge guide their social lives a 'double hermeneutic'.[21]

In writing about sociology, Giddens describes himself as a *meta-sociologist* – and this builds the Russellian Ghost solidly into his sociological project. This tradition of seeing observers and observed as operating on different logical levels leads Giddens to take what Hilary Putnam calls a 'God's eye view' of reality.[22] And in reproducing this rather asymmetrical

relation *to* his sociological object *into* his sociological theory, the double hermeneutic that sociologists are asked to recognize comes to subsume the (single-hermeneutic) reflexive practices of ordinary social agents. For Giddens, sociological theories are abstract, expansive, and potentially valid. In contrast, actors' theories are practical, limited in scope, and often based on apparently credible, yet fallible beliefs. In spite of the acknowledgement that both are reflexively involved with their world, the Russellian Ghost makes the actors being theorized into logical 'flat-landers',[23] and condemns them to occupy a restricted space subordinate to that of their sociological observers – who, in turn, are missing some of the dimensions only meta-sociologists are free to explore.

Theories that set social scientists and social practitioners apart on *logical* grounds are prone to *(re)produce inequalities in social practices* as well. For example, readers of a sociological literature that arose under such asymmetrical conditions undoubtedly learn to think with its categories and conceptions, talk in its terms, and become accustomed to assuming the logically superior positions *vis-à-vis* the subject matter this literature brings forth for them. When practical situations present themselves in which this literature is relevant, there is then a good chance that the knowledgeability of such readers unfolds into talking in abstract and general sociological categories (stereotypes) and down to those whom this literature casts in the role of the logically inferior observed.

This need not be so. The Russellian Ghost which equates objectivity with taking logically superior positions relative to and external to a subject matter can be dethroned:

1   I think, by carrying the reflexivity Giddens's knowledgeable agents already have into the *interaction* between them, viewing them as recursively involved with each other, as cognitively autonomous communicants, as substantially unequal but engaged in a mutual inquiring process;

2   by recognizing that the very process of social scientific inquiry is a *social* one in the sense that it is constituted in the knowledge theorists, theorized, and users of scientific knowledge have of each other;

3   and by allowing those affected by an inquiry *to participate* in the construction of theories concerning them, which means that neither can assume a position on top of a hierarchy of logical levels that subsumes everything and everyone else.

In a recursive theory for communication, individuals are *invited* to include themselves in their own knowledge and are able to take different positions within the realities they construct. I would hope that social scientists, who ought to have better sense than ordinary communicants of the social

entailments their constructions have, will avoid taking 'God's eye views' of the worlds of others. This would open the possibility for two-way communication with those whose realities they seek to understand.

Taking the linguistic turn seriously. Giddens acknowledges the 'linguistic turn' the social sciences have been taking but also reminds us of the contributions of both hermeneutical and ethnomethodological traditions. The lesson I draw from these is that the language we use is not quite as unproblematic and transparent as commonly assumed. It means becoming cognizant of the Russellian Ghost which leads us to think about thinking by using one language to talk about another language – which encourages unawareness of our languaging. The linguistic transparency that follows is characterized as the awareness of writing *about a subject matter* without the equal ability to acknowledge that this writing takes place *within a language* as well. My first proposition suggests that these two phenomena – content and languaging – should not be separated, at least not in writing about communication. For the same reasons, sociological writing should not be separated from the social phenomenon I claim it is.

I mentioned the god-like position the Russellian Ghost encourages scientists to assume *vis-à-vis* their (construction of) reality. Such a view undoubtedly is encouraged by an academic writing style that consists of *positionless* (impersonal and objective) statements of facts which readers can only reject in rare defiance of the scientific authority that establishes itself in this style. How something is said, what its saying assumes, and the role the discourse plays within one's already formed constructions of a social reality can be as important as what is said. An impersonal and detached use of language invites and *legitimizes authorities* that are detached from that which they are called to adjudicate. Theories written in this manner can nourish hierarchical forms of social organization and the oppression they entail can become severely restrictive of communicative practices. Besides writing, there are other modes of doing social science (such as conversing, negotiating, interviewing, exemplifying, performing, advocating, organizing), which may bring forth other social realities worth exploring.

In sum, I am suggesting that we as social scientists should be aware of the social nature of the processes of inquiry as well as the consequences of communicating findings and theories and, therefore, should not treat our own language as if it did not matter. This would mean applying the reflexivity recognized in others to our own discursive practices, admitting our conceptual struggle with the subject matter we are trying to bring forth through writing, realizing our own entanglement in the language we are using, and creating spaces that enable those that might be affected by our inquiries to participate in as equal a fashion as possible.

Acknowledging one's cognitive involvement. In my reading of Giddens, mutual knowledge combines the idea of common knowledge (A knows X; B knows X) and knowledge of each other (A knows B and himself; B knows A and herself) and becomes the stock of knowledge social actors must share (both A and B then share knowledge of X, and of each other). In this conception, knowledge requires reference to a common ground, a territory populated by social actors and social structures, a social maze for people to move around in, the 'factual evidence and theoretical understanding' of which serves social scientists as a criterion for 'validating' the accounts social actors give for what they do and why they do it. The assumption of *a common social universe* or of *one* reality for all is further evidence in Giddens's definition of mutual knowledge as that which is 'shared by lay actors and sociological observers'; and that which provides 'the necessary condition of gaining access to valid descriptions of social activity'.[24]

With this in mind, Giddens writes about sociology, about the discursive effort of sociologists to account for and clarify what a social uni-verse is like, and about social practitioners whose theories refer to the same social uni-verse they all populate – as if his own cognitive involvement in the subject matter, his own professional commitment, interest, and social position, and his own experiences in society had nothing to do with it. In fact, when he uses the word 'understanding' it usually seems to have the sense of a general consensus within a particular scholarship, during a certain period or concerning a particular phenomenon, mostly excluding his own. Apparently, the notion of mutual knowledge encourages sociological theorists to hide their own cognitive creativity behind the construction of a disowned yet privileged generalized other's knowledge. This renders an understanding of that theorist's cognitive involvement either taboo, irrelevant, or not at variance with what everyone else ideally understands.

The logical force of my second proposition leads to the contrary conclusion: all writing is bound to stay within a writer's horizon of understanding; and there can be no escape into the real world or into someone else's understanding outside one's own. As social scientists, we need to learn to interpret what we say and write as being not about mutual knowledge, nor about a world that exists outside of ourselves, but about our own construction of objects, people, and society, and our own understanding. Giddens writes neither about sociology nor about society. He can do no more than express his understanding of them. We have to admit our own cognitive involvement in the phenomena we claim to write about and assume ownership of our constructions.

I understand the need for a knowledge-based concept by which the connectivity of people within of society can be explained. I also agree with

ens,
; X;
:; B
tors
er).
d, a
for
der-
the
The
ther
h is
ides
cial

dis-
cial
the
vol-
est,
do
s to
uip,
stly
dge
vity
er's
ive
ry-

on-
ler-
one
to
ual
out
wn
ety.
to
rite

the
ith

Giddens's observation that the possibility of mutual knowledge and a common social universe to which it refers is tacitly assumed in the everyday life of ordinary practitioners as a matter of common sense. The motivation for such a single uni-verse view needs further explorations. However, I see no reason to adopt a model of knowing that is incommensurate with the thesis of humans as reflexive social practitioners. In Giddens's non-reflexive model, knowledge is mutual by virtue of it being *about* a joint social universe in which everyone resides and to which everyone has access, at least in principle. In his reflexive model, knowledge appropriately resides *within* a reflexive loop that couples cognitively autonomous beings to their environment and is no more than what shows its beholder, in Giddens's words, 'how to "go on" in forms of life'.[25] Giddens seems to resolve the conflict between the two models by allowing the non-reflexive model to govern the interpersonal, discursive, and social domain.

This is unfortunate or perhaps even self-serving because it privileges, as already remarked, the construction of one reality by social scientists over that of alternative realities. I suggest that it is this tenaciously held belief in a single social universe, in which the social sciences concur with everyday life, that brings forth such socially value-laden concepts as errors, biases, distortions, misunderstandings, false consciousness or invalidities which the social sciences then call upon themselves to criticize and correct. This kind of sociological theorizing virtually creates the kind of social phenomena it attends to. Indeed, social actors may have very good reasons to construct their social worlds very differently from each other and from their scientific observers. In contrast, a recursive theory for communication could not be called upon to judge but to understand these differences and to ascertain what would happen if they were to interact.

A recursive theory of social phenomena, including of human communication, preserves the reflexivity which Giddens needs as a building block for sociology – without banishing the variety of human understanding. But note the difference: in the above example, 'X, A and B' is the *shared* object of A's and B's knowing. But in 'A knowing B's knowing...' and 'B knowing A's knowing...', knowledge is not shared and hence not mutual either, but its practical social consequences *intertwine*. I believe that this intertwining or coordination of practices is a good entry point for understanding social phenomena constituted in the understanding participants have of it. But this becomes an issue of communication.

Communicating communication. As I said, Giddens theorizes communication only indirectly and the two notions of communication he seems to pursue may well be a logical corollary of his double hermeneutic. I will

review these and add my reading of his work as the manifestation of a third.

A good entry to his first notion can be found where he takes a historical perspective: 'a self-evident feature of traditional society . . . [is that] all contacts between members of different communities or societies, no matter how far-flung, involve contexts of co-presence. A letter may arrive from an absent other . . . has to be taken physically from one place to another.'[26] He argues that modern communication makes co-presence no longer a requirement of social interaction. Herein, communication appears as a technology of transportation, a substitution for co-presence, whose working is describable in terms of the theory of coding from one system of signification to another.[27] Giddens is not alone in playing out transportation metaphors, even where mediating technologies are not an issue. Most communication scholars speak just as freely about the communication of meanings, making knowledge available, transmitting information, conveying messages – as if meanings, knowledge, information, or contents came in the form of thing-like entities, tokens of discursive consciousness, or signs whose social qualities remain invariant during processes of dissemination and are equally accessible to all. Indeed, the vocabulary of everyday English encourages such constructions. In Giddens's case, this also connects with his notion of mutual knowledge as a common stock from which social actors must draw.[28]

To be fair, this overly simplistic notion of communication as selecting from a common repertoire and conveying entities contained therein to someone else does have a place in institutionally stable or conventionally regulated circumstances where innovation or multiple realities are discouraged. Examples include the flow of commands through a military hierarchy; the use of traffic signs as enforced by law; and the choice of words from a standard English dictionary. Commands, traffic signs, and single words are learned in advance of their use. But their use is governed by institutionalized (and sometimes discursively available) rules or codes of conduct that in effect coordinate, control, or time the reproduction of institutionally appropriate behaviours. We certainly do not communicate by responding to isolated tokens or signs – as monkeys do. The examples show, however, that we are quite capable of understanding and complying with rules or codes of conduct that reduce us, temporarily in certain circumstances, to machine-like respondents.

However, practising a transportation conception of communication (in the social sciences and in everyday life) has at least three social consequences:

1   It does not explain the communication processes that take place prior to compliance with such rules, and thus obscures the understanding of

alternative and more embracing forms of human communication. The deliberate concealment of such knowledge can be viewed as a cause of oppression.

2 It invites authorities external to this process capable of arbitrating disputes about what is to be taken as mutual, valid or legitimate.[29]

3 It confines the spaces within which communicants are allowed to be knowledgeable and to construct alternative ways of living with each other.

Giddens advances a second, and somewhat less restricted, notion of communication in his account of the effects social-scientific knowledge has on social action. He writes: "Discoveries" of social science, if they are at all interesting, cannot remain discoveries for long; the more illuminating they are, in fact, the more likely they are to be incorporated into actions and thereby become familiar principles of social life.'[30] In such situations, Giddens argues, '[t]he social scientist is a communicator, introducing frames of meanings associated with certain context of social life to those in others.' He views Erving Goffman's work as exemplary of social inquiry that turns 'tacit forms of mutual knowledge, whereby practical activities are ordered' into discursive accounts that 'draw on the same sources of descriptions (mutual knowledge) as novelists'[31] ... do.

I do not think that either of Giddens's two notions of communication apply to himself. Giddens is certainly not just explaining and reproducing his (scholarly) practices excepting his use of standard English in much the same way as he claims his knowledgeable actors do – in which he contradicts his *first* notion of communication. Nor is he merely analysing the tacit practices of social actors, or critically evaluating their discursive accounts against empirical evidence – which would render his *second* notion inapplicable to him. For me, Giddens is *creating a narrative*, taking stretches from various literatures, particularly sociological ones, and weaving them into a *novel story* which does make sense to both of us but not necessarily in the same way. I see this as a *third* notion of communication.

I would not be interested in his narrative:

1 if it merely reproduced or authenticated what I already know;

2 if it did not make sense to me (irrespective of his own understanding);

3 if I could not find a space in which to move around, taking on some positions he takes with respect to other writers;

4 if it did not invite me to construct and enter into a new social reality that has relevance to my life outside this reading.

Such a reading makes Giddens not a theorist of how sociology works, but an innovator who enables me to construct a way of seeing sociology and

society and engage in conversations with colleagues familiar with the text. This is what I mean by coordination.

Anyone who takes a discursive account like mine into consideration while writing is, *ipso facto*, involved in a recursive notion of communication. Under these conditions, a transportation notion of communication, coupled with the idea of drawing from a stock of mutual knowledge and comprehending the items selected for what they are, seems very naive and limiting. Acknowledging communicants' accounts of communication avoids the three above mentioned consequences of the transportation notions. It means:

1 not ignoring the history of the emerging coordination which is part of a recursive understanding of communication;

2 not presupposing that understanding and knowledge can be shared, common or mutual – and thereby questioning authorities and attendant oppression;

3 not imposing standards for the kind of communication constructions people may develop, demanding merely that they be viable in conversation relative to each other.

Giddens's second notion of communication needs to recognize that sociological theorists and social practitioners – like political scientists and politicians or communication researchers and journalists – are surely different, but not necessarily superior to one another.

I suggest that the third notion of communication, which I have added to Giddens's two, occurs in many spheres of social life, not merely in reading scientific writing. For example, second-order conceptualizations, to use Giddens's term, emerge even in ordinary conversations wherein one participant can bring forth in others a way of seeing which they could not come upon by themselves. Good therapists make a profession out of this skill. Social accountability works in much the same way. Unfortunately, the social sciences tend to limit issues of social accountability to questions of validity and thereby avoid the need to take responsibilities for their 'findings'. With this third notion of communication, social inquiry would have to be conducted like a good conversation, rather than a demeaning and deceptive process.

Considering ethical consequences. Giddens is clearly concerned with the validity of sociological theories when he separates 'credibility criteria' that social actors use to evaluate their reasons for actions from 'validity criteria [as] criteria of factual evidence and theoretical understanding employed by the social sciences in the assessment of reasons as good reasons . . . [and] . . . in terms of knowledge either simply unavailable to lay agents or

construed by them in a fashion different from that formulated in the meta-languages of the social theory.' He justifies the privileging of sociological reality constructions at the expense of those held by social practitioners by explicitly valuing 'the internal critique' of theories and findings 'generated by social science . . . which . . . [are] substantially constitutive of what social science is'.[32]

Giddens also observes that the social-scientific critique of false beliefs, bad reasons, and invalid social theories constitute *interventions* into these same social practices. However, if a social-scientific theory, which is accepted as valid relative to its empirical domain, becomes the source of critique and transforms this very domain, then such a theory also effects its own validity. This calls into question the epistemology in which these disembodied validity criteria are formulated and the methodology that seeks to apply them. For me, this is observing Giddens's double hermeneutic in action. Ostensibly to maintain validity, social scientific critique becomes part of a reflexive loop but on shifting grounds. It involves social scientists and practitioners in a recursive struggle that ends up reinforcing scientific representationalism, grants scientists the privilege of a 'God's eye view' of the social realities of other fellow humans, and keeps the institution of social science alive while the social realities are being (unwittingly) transformed and (re)constructed. The single-minded search for validity seems to *blind* social scientists from realizing the *constructed* nature of social reality and *their own recursive involvement* in it.

Cognitive autonomy – the individual ability to make sense, to achieve new understandings, to construct new theories, and to create new realities – is something which poets, inventors, and politicians have always known first-hand but scientists have consistently denied. When cognitive autonomy enters what a social theory seeks to explain – and a recursive theory for communication is at the core of such phenomena – *ethical criteria must be applied to social theory constructions* in preference to *validity* criteria. Consider Giddens's example of concepts like capital, investment, market, and industry which entered the discourse in economics in the eighteenth and early nineteenth centuries and have now become a reality of modern life.[33] Consider the example of Karl Marx's theories, invented to describe early capitalist society and to extrapolate from the course of its development. These theories were taken as approximations to the truth, but have served as social inventions that have shaped the world, fed numerous revolutions, changed the boundaries of countries, and advanced the very capitalism whose doom it predicted. On a minor scale consider the example of Erving Goffman's book *The Presentation of Self in Everyday Life* (1959), which was widely read and led to, among other things, architects designing places of business for people to better perform for others;

clothing boutiques with little stages, restaurants with dramatic entrance ways, theatrical department stores, etc.[34]

In much the same way, Giddens is more than a mere accountant of what sociologists do. He is creating and reconstructing a sociological theory in which some social scientists hope to find a better place for themselves and a novel way of describing people they communicate with in the course of their inquiries. Like all sociologists, at least in part, he invents social reality while claiming to describe it. We can no longer hide behind the validity of our theories; we must take *social responsibilities* for what they do bring forth.

Let me propose to treat all theories as *social inventions* that intervene with, transform, create, or maintain the realities we experience. As such, scientific efforts should be guided, not by criteria of validity or of correspondence to a reality that needs to be constructed for this purpose, but by ethical consideration of the reality that scientific theories are able to bring forth. Social theories differ from theories in the natural sciences in that they must constitute themselves in the understanding humans have of them, and they must prove themselves *viable in the communicative practices they engender*. Given the social nature of social theory, the ethical considerations I advocate cannot be cast in terms of abstract principles or rational foundations – which only create new and potentially oppressive institutions – but in terms of communicative processes that coordinate the different lives of cognitively able people. *Social theories must be liveable*.

The virtue of my recursive theory for human communication is that it is also a theory for understanding others' theories for human communication – and provides individuals living with them ample space for constructing social realities that encourage respect for the cognitive autonomy of others. I for one enjoy exploring the spaces it provides and the opportunities it opens for relating to others. This may be the most that social scientists can encourage and enact in their own social practices.

Anthony Giddens's work does not give us much help in understanding human communication. However, his concept of *knowledgeable social agents* could serve as a bridge between sociological and communication literatures.

Notes

1   Alfred North Whitehead and Bertrand G. Russell, *Principia Mathematica*, 3rd edn (New York: Macmillan, 1958; first publ. 1910).

2   Margaret Mead, 'Cybernetics of cybernetics', in Heinz von Foerster et al. (eds), *Purposive Systems* (New York: Spartan Books, 1968), pp. 1–11; Heinz von Foerster, *Cybernetics of Cybernetics or the Control of Control and the Com-*

munication of Communication (Urbana, Ill.: Biological Computer Laboratory, University of Illinois); Lars Lofgren, 'Autology for second order cybernetics', in *Proceedings of the 10th International Congress on Cybernetics* (Namur: Association International de Cybernetique, 1984), pp. 77–83; Ernst von Glasersfeld, 'An introduction to radical constructivism', in Paul Watzlawick (ed.), *The Invented Reality* (New York: W. W. Norton, 1984), pp. 17–40; Malcolm Ashmore et al., *The Reflexive Thesis: Wrighting Sociology of Scientific Knowledge* (Chicago: University of Chicago Press); Anthony Giddens, *The Constitution of Society: Outline of the Theory of Structuration* (Cambridge: Polity Press, 1984); *Modernity and Self-Identity* (Stanford, Calif.: Stanford University Press).

3   Giddens, *The Constitution of Society; Modernity and Self-Identity.*

4   Humberto R. Maturana, 'Neurophysiology of cognition', in P. Garvin (ed.), *Cognition: A Multiple View* (New York: Spartan Books, 1970), pp. 3–23.

5   Paul Watzlawick, Janet H. Beavin and Don D. Jackson, *Pragmatics of Human Communication* (New York: W. W. Norton, 1967), pp. 48–51.

6   Giddens, *The Constitution of Society*, pp. 2–7.

7   Alfred Schutz, *On Phenomenology and Social Relations: Selected Writings*, ed. H. R. Wagner (Chicago: University of Chicago Press, 1970).

8   Ludwig Wittgenstein, *Philosophical Investigations*, 3rd edn (New York: Macmillan, 1958), 59e.

9   Michael H. Agar, *Speaking of Ethnography* (Beverly Hills, Calif.: Sage, 1986).

10 Peter Berger and Thomas Luckmann, *The Social Construction of Reality* (New York: Doubleday, 1966), p. 65.

11 Giddens, *The Constitution of Society.*

12 Ibid., p. 375.

13 David K. Miell and Dorothy E. Miell, 'Recursiveness in interpersonal cognition', in Charles Antaki and Alan Lewis (eds), *Mental Mirrors: Metacognition in Social Knowledge and Communication* (London: Sage, 1986), pp. 27–40.

14 Jacob von Uexkuell, 'A stroll through the world of animals and men: a picture book of invisible worlds', part 1, in *Instinctive Behavior: The Development of a Modern Concept*, trans. Clair H. Schiller, intro. Karl S. Lashley (New York: International Universities Press, 1957).

15 Michael Polanyi, *Knowing and Being* (Chicago: University of Chicago Press, 1969); Giddens, *The Constitution of Society*; Mark Johnson, *The Body in the Mind: The Bodily Basis of Meaning, Imagination and Reason* (Chicago: University of Chicago Press, 1987).

16 Martin Heidegger, 'Letter on humanism', in William Barrett and Henry D. Aiken (eds), *Philosophy in the Twentieth Century: An Anthology*, vol. 3 (New York: Random House, 1962), p. 271.

17 John Shotter, *Social Accountability and Selfhood* (Oxford: Basil Blackwell, 1984).

18 Gregory Bateson, *Steps to an Ecology of Mind* (New York: Ballantine Books, 1972), pp. 177–93.

19 Klaus Krippendorff, 'The power of communication and the communication

of power: toward an emancipatory theory of communication', *Communication*, 12 (1991), pp. 257–96.

20 Giddens, *The Constitution of Society; Modernity and Self-Identity.*

21 Giddens, *The Constitution of Society*, pp. 248, 374.

22 Hilary Putnam, *Reason, Truth and History* (New York: Cambridge University Press, 1981), pp. 49–74.

23 Edwin A. Abbott, *Flatland: A Romance of Many Dimensions*, 6th edn (New York: Dover, 1952).

24 Giddens, *The Constitution of Society*, p. 375.

25 Ibid.

26 Ibid., p. 143.

27 Ibid., pp. 28–31.

28 Ibid., p. 29.

29 Klaus Krippendorff, 'A heretic communication about communication about communication about reality', in Miriam Campanella (ed.), *Between Rationality and Cognition* (Turin/Geneva: Albert Meynier, 1988), pp. 257–76.

30 Giddens, *The Constitution of Society*, p. 351.

31 Ibid., p. 285.

32 Ibid., p. 339.

33 Ibid., pp. 40–1.

34 Walter T. Anderson, *Reality Isn't What it Used to Be* (New York: Harper Collins, 1990), p. 135.

Communication Theory Today

Edited by David Crowley
and David Mitchell