Difference-Making from a Cybernetic Perspective
The Role of Listening and Its Circularities[1]

Larry Richards[2]

Abstract

Take as a premise that listening (and its circularities) becomes an essential practice for making a difference in the world and represents a critical concept in the design of a participative-dialogic society. The speaker-respondent circularity turns listening into a conversation. Participants set aside their habitual or socially prescribed ways of interacting and explore other ways to be present. This perspective on listening and difference-making suggests an alternative (not mutually exclusive, yet distinct) approach to the human attribute called consciousness, from one characterized by purposiveness to one focused on presence. I claim that the idea of a participative-dialogic society as desirable is so alien to prevailing ways of thinking about the world and how it works (and must work) that it would be dismissed as "anarchist" if openly promoted—that is, it implies an alternative to the reward-oriented hierarchy approach to the design of economic and social systems that dominates societal structures world-wide. By advancing the idea anyway, I expect to make a difference. With anarchical intentions in mind, I propose listening, thinking, and designing kinetically (in contrast to kinematically). Listening and its circularities replaces, or at least offers an alternative to, reward-oriented hierarchy as a way of thinking about difference-making in the world.

"…one should bear in mind that there is nothing more difficult to carry out, nor more dubious of success, nor more dangerous to administer than to introduce a new system of things…" Niccolò di Bernardo dei Machiavelli, *The Prince*

Introduction: Listening and Its Circularities

The ideas in this paper arose from the theme of the annual conference of the American Society for Cybernetics held August 9-15, 2011, in Richmond, Indiana, USA: *Listening*. I latched onto the theme from my long-standing interest in conversation and from the speaker-respondent circularity in conversations that could not happen without listening. I refer the reader to a paper by Ranulph Glanville on Listening (1999) that further stimulated my thinking.[3]

The role of the observer has been a central feature in cybernetics from the beginning. In the first order, the focus was on the observed system; in the second order, the focus was on the system doing the observing and the system that includes the observer as an element, turning cybernetics back on itself—a self-referential and reflective turn. While the word observer was always to be taken as a synecdoche for a variety of perceptual activities, the selection of the word in cybernetics was in support of the scientist who relies so heavily on specific forms of observation. The observer is also a listener. I distinguish the act of listening from observing, as listening gives attention to the experience of language in all its forms, and its addition has everyday consequences for all of us and our society.

The act of listening does not have to be limited to attention to "what is said". There are two tracks of language—the descriptive track and the orienting track (von Foerster, 2003a, pp. 295-7). Listening not only for "what is said", but also for "what 'what is said' does", can turn human interaction in language into a conversation. Listening for both the content and the dynamics (with an emphasis on the latter), simultaneously, generates a dialogic, an opportunity for human interaction to use conflict to create new alternatives.

I wish to show that listening, in this rich sense, opens up the possibility for a new way of thinking about a desirable world and its social structures and processes, a world in which all humans participate in changing that world. Since listening (and its circularities) as a way of thinking about difference-making is not supported by the hierarchical and reward-oriented structures that currently dominate societies world-wide, its manifestations represent an approach that will and must be characterized as anarchical. That is, if and when people in a hierarchy take up listening, the hierarchy breaks down; hierarchies must resist listening (in its rich and circular sense). As an alternative to causality and power as a way of thinking about making a difference, I suggest an acceptance of dynamics and dialogue. What could be any more anarchical than that—a network of conversations can change the world!

Participation: when I makes a difference and is AWARE that I makes a difference. The use of the third person "I" is intended to indicate that all I's are to be included; participation is a shared experience. The requirement of awareness is what distinguishes this description of participation from some others.

Conversation: when two or more participants engage in an interaction in a language in which the dynamics of interaction begins with an asynchronicity (characterized by a disagreement, conflict, friction, tension, being on different planes, being out of sync) and moves toward synchronicity (agreement or agreement to disagree, which can include new thoughts and desires). Conversations may not reach synchronicity; however, they move in that direction as the participants seek to resolve the asynchronicity. Conversation is sustained by the desires of the participants for recurrent interaction with each other. This desire presupposes listening as a component of all conversations.

A participative-dialogic society: when the society I imagine supports the participation of all its members through a network of conversations. While the structure of the network can take many forms and be mediated by many possible technologies, the desirability of the society is based in the awareness of all members that they can participate in the decisions that affect them, that their thoughts and desires are heard, and that they do make a difference in moving beyond individual desires, toward the desirable.

Anarchy: The word anarchy has been used to speak of no rules, no rulers and no governance of any type. I use the word anarchy in its modified sense: when I wish to speak of a form of governance that does not exist in any current nation-state in the world—one with no rulers, yet some rules. It is a placeholder for an alternative to reward-oriented hierarchy.

The Dilemma of Consciousness: An Alternative Approach

The listening in which I am interested is not the passive type, where someone fades into the background as others take the floor. My interest is in an active form of listening where, although not speaking, the listener is present and participating in a conversation; and, there is no reason why a speaker cannot also be a listener while speaking. A dilemma of this form of listening arises when the question is asked: What do I want to accomplish by listening such that it is important that I be present? Or, for what purpose am I to be active and present? As soon as this becomes the question, attention shifts to being an active listener with a purpose or goal. When this happens, the purpose takes over the listener's actions, presence becomes a manifestation of the self-importance of the individual and his/her purpose, and the conversation suffers if it lasts at all.

I contend that this dilemma arises from the way that, in current language, human awareness of self, or consciousness, is handled. Gregory Bateson (1972a, 1972b) wrote of the dysfunctions of conscious purpose and the human inability to consider all possible consequences when focusing on ends. So-called *rational planning* dominates the language of current corporate and government decision making; it suggests that ends be selected first (as goals or objectives) and then the best means to achieve those ends be identified (an optimization exercise). Actual decision processes often don't follow this pattern, with vested interests taking over when conflicts arise. However, this way of talking and hence thinking about desires and intentions dominate, and consciousness is pointed to as the source.

Cybernetics is oriented toward resources, toward constraints and possibilities, toward how resources could be reconfigured to create new systems even if we do not yet know how to do it. If we are relatively happy with the current state of affairs or resolved to accept it as unchangeable, we do not need cybernetics. We need cybernetics when we wish to change the current system of things. So, rather than a consciousness of purpose, where values and desires are treated as goals or objectives to be accomplished in the future, I propose a consciousness of presence, where values and desires are treated as constraints specifying what is to be avoided in the here and now. In a conversation, the listener's presence shifts from one of insistence on purpose to one of avoidance of those

dynamics that could undermine the conversation or preclude other conversations. The listener maintains this presence through a variety of actions, like gestures, facial expressions, movements and even sounds.

There are other aspects of this approach to consciousness worth mentioning. One is the connection to thinking. The consciousness of purpose arises from a particular way of thinking, and calls on that way of thinking when action is to be taken. It is a way of thinking that is consistent with the logic of causality, the logic of "if…then". It is so embedded in our everyday language that it gets applied almost automatically, without thinking (so to speak). In the consciousness of presence, where intent is synonymous with an awareness of values and desires as constraints, and action is directed toward avoidance of undesired dynamics, there is no one way of thinking, as the everyday logic of causality doesn't work here. Thinking is required, and the way of thinking is a choice. One version of cybernetics, as a way of thinking about ways of thinking (of which it is one), encourages deliberate thinking.

Another aspect of consciousness that differentiates the purposive approach from the alternative is the orientation to time, history and memory. The logic of causality requires that time be taken as external to the individual and as given, not constructed. The logic of avoidance of undesired dynamics, in the here and now, allows the individual to craft time as a strategy. In the logic of causality, history and memory are either right or wrong, changeable only to make them correct. In dynamics, history is continuously invented, and memory is relational, hence also transformable. Herbert Brün's "the art of instantaneous remembering" offers a different approach to presence, one with which experienced performers may be familiar: "Try and project an event you care for, while it happens to you, into an imagined past, so that you can experience the event simultaneously 'now' and 'once upon a time'." (H. Brün 2003, #118) When memory of an action can occur simultaneously with the action, listening and presence become performance, and performance becomes a play with dynamics.

Thinking: when I am aware, in a language, of a set of concepts/ideas and the connections among them. This use of the word thinking distinguishes it from the word cognition in that awareness is required; I speak of cognitive processes as happening with or without awareness. Metaphors for the experience of thinking might include: a sequential "unfolding" of the set of concepts and their connections, or a sustained "churning up" of the set of concepts and their connections. Thinking occurs as a requirement of conversation, whether with another or with oneself.

A way of thinking: when I am aware of a particular pattern of connecting, unfolding and/or churning. This pattern is sometimes called a paradigm. Since I claim that active listening in a conversation requires thinking, the way of thinking is directly linked to the way of listening. Logic is a common way of connecting, although not the only way, and there are many possible logics.

Deliberate thinking: when I explain my way of thinking as a choice from a set of alternative ways of thinking (with awareness of my desires with respect to the

consequences of my choice). The criteria for choosing depend on the approach to consciousness taken.

Reward-Oriented Hierarchy as A Way of Thinking

In a language, there is built-in logic. This logic may often not follow the rules of a formal logic, but grammar and common usage reflect a prevailing logic. Most world languages embed a logic of causality and rationality, the logic of "if…then", "cause…effect" and "means…ends". When I simplify a system that would otherwise consist of many components or variables, with richly connected relations among them, I can get stuck with logical paradoxes and contradictions that make it difficult to explain or predict a system's behavior, and hence to account for unanticipated, perhaps undesirable, consequences. Ways of dealing with this type of situation include ignoring such systems as intractable (the system of human population growth might be an example), calling on a deistic explanation (only god can address the complex system of climate change), or designing the system to make it logically consistent (the work-breakdown structure approach to the design of technically-complex products).

The currently dominant way of thinking about structuring complex systems is hierarchy. Bertrand Russell in his theory of logical types identified a source of this way of thinking. One of the persistent contradictions in propositional logic arises with the set that includes itself as a member—the self-referential paradox. Russell proposes a hierarchy of logical types as a way to avoid this paradox: whenever a set includes itself as a member, create a new level of sets so that no set at a level contains itself as a member. In other words, group components or variables into categories (logical types) and then create categories of categories, breaking down or not allowing the rich relations that might otherwise be possible.[4]

When hierarchy is applied to social structures and processes as a way to prevent what would otherwise be complex relations, people get locked into boxes and the rich interactions that might be possible without the hierarchical structure are discouraged, if not prohibited. Everyone has their task to do or their role to play, and if everyone does their part, the system will run smoothly as a whole. Managing the whole implies control of resources, so that resources go where they are needed to meet the purposes of the whole, with the level of control and access increasing as one goes up the hierarchy. Social hierarchies as purposeful support the rational approach to planning and get reinforced by the prevailing language and its logic, and the culture that language entails.[5]

Humans do interact; they have a preference for being social. So, how do social hierarchies keep their people from working together and conversing and building rich relationships? Humans have durable needs and occasional desires. By superimposing a reward structure on a social hierarchy, rewards that require access to resources, the

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[4] For more on the self-referential paradox, Russell's theory of logical types and hierarchy, see Krippendorff (2009a, 2009b).
[5] The definitive piece on reward-oriented hierarchy and language is Marianne Brün's "Paradigms: The Inertia of Language" (2004), which I recommend to anyone interested in social change.

pursuit of needs and desires can be tied to maintaining membership in the organization and performing the tasks or fulfilling the roles that their place in the hierarchy prescribes. There are the rewards for continuing membership in the organization and rewards for being selected to move up the hierarchy, with the highest reward going to the person or few people at the top. Control of resources by the few then creates the scarcity of resources needed to generate value in the reward structure, and the reward structure creates power differentials, all a consequence of the predominant way of thinking about how to manage complex systems as embedded in everyday, communicative language.

I observe that reward-oriented hierarchies do not encourage, but rather discourage, conversation, and thus listening in its rich and circular sense. Conversation breaks down power; it is not about communication, but about maintaining and creating distinctions. Conversation is then the converse of control; it undoes control by generating new distinctions. Hierarchical structures need communication, not conversation, to operate. This is not to say that people in hierarchies do not get together across functions and units and talk to solve problems; such may be necessary to maintain the integrity of the organization when the rich relations that have been squelched by the hierarchy rear their heads (as long as the work and talk is about how to bring those relations under control and keep them from distracting the organization from its primary purpose). It is rather to say that conversation for new distinction's sake works against the maintenance of lines of responsibility, authority and accountability upon which reward-oriented hierarchies depend. The types of listening and talking encouraged in these organizations are limited to the communication people need to do their tasks or perform their roles, and then to get their rewards.

Windows on Dynamics

So, we, at least in the West, seem to be stuck with a way of thinking about systems and their design that leaves reward-oriented hierarchy as the default option. We may experiment with other options, only to find that people live in a society that uses the language that embeds the logic that generates the way of thinking that leads the experiments to dissipate. I am an advocate of the experiments; that they do not sustain themselves is not a reason to become cynical, but rather an inspiration to try again. That people try such experiments serves as an indication of how passionate they are about their desire for a change and the need for alternatives.

The cybernetics of social change may offer some hope. Cybernetics recognizes the self-referential dilemma of language: to talk about language requires that we use language to talk about it. Cybernetics embraces paradox and self-reference, and alternative logics. Cybernetics understands that the attempt at consistency in the current language generates logical domains that, although non-intersecting, occasionally (and sometimes desirably) bump into each other. My cybernetics takes as its motivation the domains of relations and dynamics, and the bumping that goes with them.

The domain of relations: when I wish to speak of the causal or behaviorally limiting connections between the components or variables of a system. The word structure is often

used to speak of a pattern of relations. Relations arise in language and decay into objects (both concrete and abstract). (von Foerster, 2003b) The social function of relations is to provide descriptions and explanations that allow us to make sense of the world and stabilize our existence, even if only temporarily.

The domain of dynamics: when I wish to speak of a pattern of changes, where change is fundamental (**not** object or element). The word process is often used to speak of a pattern of dynamics. Dynamics are experienced directly as perturbations to our structures, where our structures can be articulated and the dynamics belie direct description. As soon as we speak of dynamics, the richness of the dynamics begins to dissipate, relations form, and objects arise. The social function of dynamics is to trigger changes of state in a system and potentially retard its decay.

The idea of the domain of dynamics opens a door to a way of thinking about alternative social structures, despite the current language and its logic. The domain of dynamics does not have its own logic, per se, although it could be viewed as encompassing all those logics that are not yet recognized, where once one is recognized it is no longer in the domain of dynamics. The domain of dynamics is therefore elusive— experienced continually but to which I can only point when attempting description or explanation. How can acceptance of this distinction be used to challenge current communicative language and its prevailing logic?

An alternative to hierarchy as an approach to the self-referential paradox, which if allowed opens up possibilities for new ways of thinking and new approaches to social design, is to recognize that this and other paradoxes and contradictions arise in a logic that is time-less—that is, the idea of time is not in the logic itself. So, when time is applied to a statement that is true when it is false and false when it is true, a new value serves to augment the logic: an oscillator—true…false…true…false…true…and so on, and the idea of time is invented. Of course, these paradoxes and contradictions happen all the time in everyday interactions, and get used in many ways in current society (political rhetoric, advertising, psychotherapy, among others). However, to maintain reward-oriented hierarchies requires that time be treated as external and given, not invented. The standard clock becomes the regulator of our lives, and we accept that as unassailable so that we can live and work in these hierarchies with all other people who are doing the same. If, however, we can accept that time is invented, it opens up possibilities for crafting time and introducing alternative clocks in our attempts to create alternative social structure and processes.

Gordon Pask (1979) identified a distinction in dynamics that he used to talk about the design of current computing devices. He decried the dependence on the kinematic (sequential, step-by-step) way of thinking in the design of computing devices and proposed a kinetic (non-linear, massively parallel) way of thinking as an alternative. Kinematics is a view of dynamics from a frame by frame perspective (with the same root as the word cinema; examples might include: viewing arrivals of a magazine to which you subscribe or planning a sequence of events). Kinetics is a view of dynamics from a phase space or field perspective (as in viewing the motion of fireflies in a bottle or of a

galaxy). Both are ways of describing motion. The kinematic view is useful when observing or describing motion over time, using a "standard" clock. The kinetic view is useful when observing or describing a pattern of motion, where the pattern remains relatively stable over time, irrespective of the clock. Kinematics provides information on sequence and trend. Kinetics provides information on constraints and possibilities. While both can be used together, they are distinct types of looking.

For the dynamics of conversation and hence of a dialogic society, I prefer to take a kinetic view. I can observe a conversation over time if I wish, mapping out the changes in the participants and their actions in order to predict what might happen. However, the idea of conversation is that it is not predictable with respect to specific outcomes, and that that unpredictability is desirable in generating new alternatives and new opportunities for choice. For social change and design, my interest is in the overall pattern of dynamics—the kinetics of conversation, which starts with an asynchronicity and moves toward synchronicity, with surprises arising from the variety of tactics employed by the participants for sustaining the conversation and moving toward something new.

This distinction between these two windows on dynamics suggests a new approach to social design, one that facilitates participation through dialogue and accommodates continual change. The structure and processes of Alcoholics Anonymous (2001) may provide one model: there are no rulers, just twelve traditions (values) and twelve concepts (principles, steps), and a process taken up by its participants that results in meetings (conversations) scheduled in cities and towns throughout the world on almost a daily basis. It is sustained without leaders, only be the interests of its participants. I also find the idea of syntegrity, developed by Stafford Beer (1994), with its icosahedron-based structure as an alternative to hierarchy, an intriguing offer with the potential for a design of a technology-assisted, world-wide system for participative decision-making.

I claim that these ideas for dialogic alternatives can and do arise from a kinetic look at the dynamics of a network of conversations. The structures and processes are designed to encourage continual transformation (change of system), not just continual improvement (change in a system)[6], and they all presuppose listening in its rich and circular sense. A society of reward-oriented hierarchies is transformed to a society of conversations, a society of listeners. Relative to current social structures and processes, I find it useful to treat this transformation as anarchical.

Conclusion: Listening and Its Circularities as A Way of Thinking

Listening (and its circularities) recognizes the desirability of fostering incompatible and opposing ideas, and the value they represent in generating new ideas, which then solicit new incompatible and opposing ideas. Listening also recognizes the dialectic between individual desires and the socially desirable. In the current society, listening is seen as a generous act; in a desirable society, viewed from where we now stand, it could be seen as a selfish act. Listening would be a way of getting what we want by helping others get

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[6] Improving on a system that is **not** working can make it **not** work even better.

what they want, in a reciprocal relationship. How can I help move toward this transformation? What do I do?

While the idea of a participative-dialogic society has utopian intentions, it is not a utopia; it is an ongoing process, a particular dynamics of interaction perhaps, but one that is always changing. I may be able to articulate what it is not (it is not violent), but not what it is, so it is not something I can plan for or cause to happen. It will happen when it happens, when the current is ready to be replaced with the new. Everything I do now I do in the current society, and what I can do is governed, in large part, by what current language and logic enables. However, language can be made flexible: think of poetry.

I can also do whatever I do with an eye and ear toward generating conversations; that is, actions undertaken as performance (a playing with dynamics) have the potential to trigger conversations. When we play with dynamics, we create asynchronicities that challenge current language and logic. This is also the role of art in society: to challenge, anti-communicatively[7], the communicative language that supports and reinforces reward-oriented hierarchy as the only workable option for social design, and the purposeful, power-oriented, and kinematic ways of thinking that go with it.

Listening closes the loop on what we can do. We can do it here and now, with intent. Conversation requires listening, and it is ubiquitous in a participative-dialogic society. Listening as presence, conversation as kinetics, and participation as perturbation offer alternative ways of thinking about how we can make a difference in the world. I leave as a proposal for further conversations this thought: if you desire a new world (an anarchical intention), not just an improvement on the current one, consider listening, thinking, and designing kinetically (in contrast to, or at least in addition to, kinematically).

A new system of things implies a new way of thinking. Insofar as conscious purpose places blinders on us, listening awakens us to a vista of new possibilities.[8]

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[7] For more on the idea of anti-communication, see H. Brün (2004) and Richards (2009).
[8] I wish to thank a number of readers and reviewers for their comments and suggestions. They were contributive to the paper and to my thinking.

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