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The Nonexistence of Noncompliant Families: The Influence of Humberto Maturana

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In the nursing of families, the expectations are that families will comply with ideas and advice that could promote, maintain, and/or restore their health. When families are not compliant to nursing interventions, nurses frequently interpret this behavior as an unwillingness or a lack of readiness to change. This linear view implies that problems with adherence to treatment regimens reside within individuals and families, not within the interactions or relationships between individuals. In our opinion it is arrogant, insulting, and violent to label families as "noncompliant."

If nurses choose to apply some of the ideas of Chilean biologist Humberto Maturana, however, descriptions such as "noncompliant," "resistant," "dysfunctional," and "unmotivated" are questioned. On the basis of the science of biology, Maturana (1978, 1983, 1985, 1988) offered an intriguing metatheory of cognition. When this theory is applied to nursing practice,

AUTHORS NOTE: this chapter was previously published as follows: Wright, L. M., & Levac, A. M. (1992). The noncomliant families: The influence of Humberto Maturana. *Journal of Advanced Nursing, 17,* (913-917). Reprinted with permission.

the nursing diagnosis of "noncompliance" is not only an epistemological error but a biological impossibility. This revolutionary theory invites nurses to reexamine their assumptions about the existence of noncompliance and challenges the relevance of the North American Nursing Diagnostic Association's (NANDA) classification system.

Although many interrelated sets of theoretical concepts are inherent in the theory, the definitions and significant implications of structural determinism and objectivity-in-parenthesis are highlighted in this chapter. The application of these concepts reveals the impossibility of "instructive interaction," leading us to conclude the nonexistence of noncompliant families.

Structural Determinism

A major proposition of this theory is that all living systems, including humans, are structurally determined. It is the individual's structure and history of interactions that determine change in his or her state or behavior. It is not nurses who determine or direct change.

Maturana's metatheory of cognition evolved from the most unlikely of experiments—experiments examining the structural mechanism of perception in frogs. Maturana, Lettvin, McCulloch, and Pitts (1960) discovered that the "function of the retina in the frog is not to transmit information" and further concluded that "the transformation of the image (not transmission of the image) constitutes the fundamental function of the retina" (p. 170). What a frog perceives visually has been transformed by the retina in a manner that is specific to the organization of the frog's nervous system. Thus perception is not a picture of the world coming in and recording on the frog's brain (Simon, 1985), but rather it is the frog's structure that determines its own reality.

Maturana, Uribe, and Frenk (1968), when describing a biological theory of color coding in the primate retina, concluded that the activities of a nervous system do not reflect an independent environment and therefore do not reflect an absolute external world. Maturana and his colleagues also concluded that an animal's interactions with an environment are best represented by the animal's own organization and not by an independent external reality. Because the basic architecture of the nervous system is universal, Maturana extended his earlier ideas related to the visual perception of frogs to the perceptual process of primates, which includes human beings. Consequently what is perceived by an individual is always a result of transformation within the structure of the individual.

The revelation that all living systems cannot refer to an external, independent reality becomes not only a philosophical reflection but also a con-

stitutive biological condition of humanity (Menđez, Coddou, & Maturana, 1988). The uniqueness of this theory is that it reflects an epistemology in which individuals (living systems) draw forth reality—they do not construct it nor does it exist independently of them (Maturana, 1988). Therefore change or learning occurs in humans from moment to moment, either as a change triggered by interaction(s) or "perturbations" coming from the environment in which it exists or as a result of its own internal dynamics. It is the history and structure of the living system that determine which perturbations can trigger changes of state.

Explanations of Our World: Objectivity and Objectivity-in-Parenthesis

Maturana offered the idea of two possible avenues for explaining our world: objectivity and objectivity-in-parentheses.

Objectivity. This view assumes one ultimate domain of reference for explaining our world. Within this domain, entities are assumed to exist independently of the individual. These entities are used to justify and validate explanations. Such entities are as numerous and broad as imagination might allow and may be identified explicitly or implicitly as objects such as "truth," "mind," "knowledge," and so on. In this avenue of explanation, we come to believe that we have access to an objective reality.

Knowledge about the "truth" by one person becomes a demand for obedience by another—for example, a nurse's expectation of compliance by families. Maturana (1987) claimed that the view of an objective reality entails the possibility of conflict (a mutual negation) that may lead to emotional contradiction. An act of "violence" that is "holding one's opinion to be true such that another's must change" (Maturana, 1987) may result from conversation based on descriptions of "truth."

The label of "noncompliant" arises in this domain of explanation. "Noncompliance" is one of the NANDA-approved nursing diagnoses under the category of "Choosing" (Carpenito, 1991; Carroll-Johnson, 1989). Specifically it has been defined as "a person's informed decision not to adhere to a therapeutic recommendation" (Carroll-Johnson, 1989, p. 541). When we operate in the domain of objectivity or empiricism, nurses believe and behave as if they have access to an objective reality—that is, that our observations/assessment of a family member's behaviors are "true." Consequently, within this domain, nurses can fall into the trap of believing that individuals and families are noncompliant and that families should adhere

to our advice and opinions. We also invite the possibility of conflict and violence between ourselves and our patients.

Objectivity-in-Parenthesis. When objectivity is placed in parenthesis, nurses recognize that objects do exist but are not independent of the living system that brings them forth. The only truths that exist are those drawn forth by observers such as nurses. "The observer brings forth the objects that he or she distinguishes with his or her operations of distinction as distinctions of distinctions in language" (Maturana, 1988, p. 30). Distinctions made by an observer of what appears to be stimulus (input) and response (output) of the nervous system is not a property of the nervous system but rather a property of the domain of observations. Thus brain and behavior are linked only in the eyes of the observer. As Maturana (1985) states, "The mind is not in the head, it is in the behavior" (p. 311).

Drawing distinctions is the basic cognitive operation of the observer. *Cognition* may be defined as "the act or process of knowing, including both awareness and judgment." Cognition is not a representation of the world "out there" but rather an ongoing bringing forth of a world through the process of living itself. Therefore it is always in our coexistence with others that we are bringing forth reality. Humans literally create the world in which they live, while coexisting and co-drifting with other human beings. It is human activity that brings forth and validates human activity.

Maturana (1988) claimed that we exist in domains that we bring forth through living and that "they are domains of realities, domains of explanations that we present for explaining our experience, in the understanding that we cannot claim anything about an independent reality" (p. 29). Every explanation is a reformulation of our experience. Our explanations are conveyed through narratives that embed the meanings (beliefs) that we have about our experiences. It is these beliefs that our clients have about their experiences—such as chronic or life-threatening illness—that are central to how they cope with them. In applying this idea to the nursing of families, every family member has his or her own reality or perspective of his or her experience of illness. Nurses need to encourage the expression of each family member's reality. For example, if each family member is asked, "What is your point of view on how your mother is coping with her MS?" many different perspectives or realities will be drawn forth. On the basis of the concept of *structural determinism,* each reality must be considered as "true," valid, and legitimate.

The idea that humans bring different perspectives to their understanding of events is not new. But Maturana's perspective on observations is much more radical: It is based on biology and physiology, not philosophy.

Maturana stated that not only do we have different views or perspectives on a given event but also the event itself has no existence separate from our ability to distinguish it in words and symbols. One's view is not a distortion of some presumably correct interpretation. Instead of one objective universe waiting to be discovered or to be correctly described, Maturana proposed a "multiverse," where many observer "verses" coexist, each valid in its own right.

Mendez et al. (1988) state:

> If . . . we claim that the biology of the phenomenon of cognition demands that we operate with objectivity-in-parenthesis, then we can no longer keep the notion that we have a legitimate transconsensual authority of power to decide what happens to another human being, based on the demand for obedience that the claim of objective knowledge entails. . . . Indeed, putting objectivity in parenthesis entails the explicit recognition that the desirability or undesirability of any given behavior is socially determined, and that we cannot go claiming that something is good or bad, healthy or unhealthy in itself, as if these were intrinsic constitutive features of it. (p. 151)

Within the domain of objectivity-in-parenthesis, we cannot claim that a family is noncompliant. Therefore nursing assessments are based on observer perspectives, not on ultimate truths.

The Impossibility of Instructive Interaction

Instructive interaction implies that a living system is able to receive instructions from the environment, in the form of information to be processed (Aboitiz, 1985). It assumes that individuals can specify structural changes in other individuals through instruction. For example, as nurses we believe and are invested in the idea that what we teach our clients is what they will learn. Maturana and Varela (1987) made the startling declaration that there cannot be any instructive interaction. This notion emerges from the central assumption that living systems are structurally determined. Furthermore the nervous system is an informationally and operationally closed system. As a closed system, it is the nervous system that determines the changes of relative neuronal activity; it is not the perturbation or information that determines the state of the nervous system. If living systems were "instructable," they all would respond in the same way to a given perturbation. Information or instruction cannot be imparted onto someone; it can be offered only as part of an interaction. It is the system in constant interaction with its medium, not the information or instruction, that specifies how it will behave.

Structural changes in living systems are unique and dependent on the phylogenic history (genetic or evolutionary history) or the ontogenic history (all the past structural changes or history of interactions) in the life of the organism. Thus changes in family members are determined by their own structures, not by others. Therefore nurses are not change agents; we cannot and do not change anyone.

Consider the following scenario: A cardiovascular clinical nurse specialist (CNS) conducts a weekly smoking cessation clinic for cardiovascular patients and their families. The CNS provides relevant literature informing her cardiac patients about the risks of smoking and promotes a variety of strategies for patients to decrease and eliminate smoking behavior. She is puzzled by the wide range of responses to her nursing interventions: Some patients quit smoking almost immediately, others decrease their smoking behavior, and still others remain firm in old smoking habits. Clients who fall into this latter category may be diagnosed quickly as "noncompliant." An implication of Maturana and Varela's (1987) theory, however, is to recognize that such clients are not noncompliant but rather have not selected a particular novel perturbation that invites them to decrease their smoking.

The Possibility of Collaborative Interaction

If instructive interaction cannot exist, how can we as nurses impart ideas about health promotion and health restoration? Maturana offered the following suggestion: "You will never be able to do instructive interaction. The most that you can do is to talk to the patient and invite this person to a reflection that will allow the realization that there is an illness and that there are certain actions that he or she has to take. You cannot force the other to an understanding" (H. R. Maturana, personal communication, October, 1988). Inviting individuals and families to a reflection can be accomplished by (a) creating a context for change, (b) creating an environment in which persons change themselves, and (c) offering ideas, advice, and suggestions that can serve as useful perturbations. By remaining curious about family members' beliefs about their illness, nurses can help patients and their families discover which perturbations (interventions) will trigger structural changes that will result in more effective responses to health problems.

Through collaborative interaction with families, nurses also can eliminate what has been called the "language of loathing" (Szasz, 1973, p. 27) and can liberate themselves and families from the language of pathologizing. Labels such as "noncompliant," "resistant," and "dysfunctional" become

irrelevant, disrespectful, and insulting descriptors. More important, when applying Maturana's theory of metacognition to nursing practice, these behavioral descriptors are biologically impossible.

One of the assumptions of noncompliance is that relationships between nurses and families are hierarchical (Stanitis & Ryan, 1982). It would be more respectful and more humble for us to think of ourselves in non-hierarchical, collaborative relationships with families—that we are involved in co-drifting with families, creating a context for change rather than believing that we can be change agents.

To move toward more collaborative relationships with families, we often find it useful in our clinical practice to ask families what they want to conserve rather than what they want to change. This is also a very useful intervention on ourselves as family nurse clinicians (Wright, Watson, & Bell, 1990). We attempt to design interventions that invite families to a reflection (Wright & Nagy, in press; Wright & Simpson, 1991; Wright & Watson, 1988). Interventions that invite reflection have the potential of being selected as perturbations. Family members who respond to particular perturbations (therapeutic interventions) do so because of the fit between the perturbation and their structure.

Conclusion

One question still remains: Are there risks of being too enraptured with Maturana's metatheory of cognition? We believe one risk of embracing Maturana's theory with overwhelming enthusiasm to be that we would behave with too much certainty. If we are too enthusiastic or certain about Maturana's theory, it becomes too "true." This "truth" becomes a tyranny because we end up submitting to an external "truth," which is the very idea that Maturana is challenging. On one occasion, though, we need to embrace wholeheartedly Maturana's theory: whenever we encounter the impulse to pathologize families as noncompliant.