

Liquid Identity: A Nonlinear Approach to the Understanding of the Puerto Rican Identity

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Abstract

Traditional human developmental theories such as those of Freud, Erikson, and Jung as well as ethnic/racial cultural identity development theories view identity development occurring in a linear and a stepwise progression. This view does not account for the complexity of a number of ethnic minorities identity development in the United States such as the Puerto Rican identity development. Therefore, this article explores the Puerto Rican ethnic identity using the concepts and principles of chaos theory. The article describes the Puerto Rican ethnic identity as liquid and complex. Clinical applications and implications for counseling are also suggested in the article.

Keywords: Ethnic identity; Puerto Rico; chaos theory; minority groups.

Identidad Líquida: Un Acercamiento No lineal hacia el Entendimiento de la Identidad Puertorriqueña

Compendio

Las teorías tradicionales del desarrollo humano como las de Freud, Erikson, y Jung así como las teorías culturales étnico/raciales del desarrollo de la identidad ven ocurrir el desarrollo de la identidad en una manera lineal y en una serie de etapas progresivas. Esta perspectiva no justifica la complejidad del desarrollo étnico de la identidad de las minorías en los Estados Unidos como lo es el desarrollo de la identidad puertorriqueña. Este artículo explora la identidad étnica puertorriqueña usando los principios y conceptos de la teoría del caos. El artículo describe identidad puertorriqueña como líquida y compleja. Aplicaciones clínicas e implicaciones son también sugeridas en el artículo.

Palabras clave: Identidad étnica; Puerto Rico; teoría del caos; grupos minoritarios.

Nietzsche once said, "one must still have chaos in oneself to be able to give birth to a dancing star" (Nietzsche, 2002). Psychologists, counselors, and other mental health professionals have long been aware of the complexity of identity formations, particularly with regard to the influence of race and ethnicity (Harris, 1995). Although identity is a major consideration in the assessment and treatment of clients seeking mental health services (Sue & Sue, 2003; Telles & Karno, 1994; Weiten, Lloyd & Lashley, 1991), many anthropologists, psychologists and other social scientists have not yet agreed on a single definition of identity (Kroger, 2000). Despite disagreements, however, all existing definitions have three components in common. First, identity is characterized by consistency resulting in a clear and stable sense of who one is and what one stands for (Weiten, Lloyd, & Lashley, 1991). Second, a person's identity is characterized by individualism that is defined by a set of central functioning traits reflecting the structure of his/her character (Flanagan & Rorty, 1993; Jacobson-Widding, 1983). The third characteristic that is present in all of the definitions of identity is the reflection of mainstream cultural values and worldviews (Sue & Sue, 2003).

Erikson (1968) incorporated these three components in his view of identity, which he describes as a persistent

sameness within oneself and a persistent sharing of some kind of essential character with others. He elaborated on this concept by explaining that identity has several connotations. At times it may refer to a conscious sense of one's own individual identity. At other times, identity may refer to blending of the individual identity with ideas and identity of a group. Thus, a sense of identity is a sense of the real me individually and in relationship with others.

According to Erikson (1968), identity is located at the core of each person, and at the core of his/her communal culture, and it is formed by a process of simultaneous reflection and observation. This process takes place at several levels of mental functioning simultaneously. At one level, individuals continually judge themselves based on their perceptions of how others judge them. On another level, individuals judge themselves as they compare themselves to others. This process is continuous and usually unconscious except where circumstances arise that creates emotional disequilibrium.

Identity is a complex phenomena, which has inspired many people to engage in a search for meaning. These pursuits involve a need for individual definition and how individuals find meaningful connections with culture and society as a whole (Kroger, 2000). Identity development emerges within humans bonds. The self is consequently not the isolated entity revered in Western male images of individualism. "The self is embedded in social systems that pervade the self so that development in one influences the other" (Mahoney & Moes, 1997, p. 180).

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The United States is a nation of immigrants that is characterized by rapid political, technological, and economical changes. As such it presents unique challenges to theories of development and their definitions of identity. The constant input of experiences, stimulus and contradictory messages appears to have had an impact on the formation of self or identity for ethnic minorities in this country, who find themselves caught between at least two different sets of cultural rules and experiences, and, in many occasions, in more than three sets of cultures or subcultures (Sue & Sue, 2003). Puerto Rico, one of the United States' territories, presents similar diversity of cultural characteristics with those of the mainland United States (Christensen, 1975, 1977; Fitzpatrick, 1987; US Commission on Civil Rights, 1976; Vázquez, 1997). The political ambiguity of Puerto Rico's status has also impacted how Puerto Ricans define their ethnic identity (Fitzpatrick, 1987; Quintero Rivera, González, Campos, & Flores, 1960; Meléndez Veléz, 1998). The political situation of Puerto Rico revolves around the question of whether Puerto Rico should become another state of the United States, continue to be a Commonwealth, or become an independent nation (Meléndez, 1988; Meléndez & Meléndez, 1993). In other words, Puerto Rican identity is somewhere between being North American (meaning being another state of the United States of America) and being Latino (Flores, 1993; Rivera Ramos, 1993; Vázquez, 1998). This issue appears more pronounced in the continental United States than in Puerto Rico, nonetheless it is an important issue among Puerto Ricans in Puerto Rico, as well as political figures in United States (Duany, 2002; Haslip-Viera, 2001). This ambivalent status has created unique problems among Puerto Ricans in terms of identity, especially for those from lower social economic status that link their identity more to economic conditions and opportunities than to issues of nationalism or pride (Cordasco & Bucchioni, 1973; Fitzpatrick, 1987; López-Baralt, 2001; Quiñones Vizcarrondo, 1989; Quintero Rivera, 1976; Vázquez, 1998). Therefore, for Puerto Ricans the problem is not only one of being caught between two or more different sets of cultural rules and experiences but between four different sets of cultural rules and experiences (i.e., subcultures, survival needs, family, etc.). That is each particular culture (Taíno, African, Spaniard, and United States) has a different cultural rules. Likewise, the proverbial question for all Puerto Ricans, as well as for many other ethnic minorities in the United States, is how American (meaning North American) Puerto Ricans really are (Meléndez Veléz, 1998; Sue & Sue, 2003). Of course this question does not go unchallenged, as many researchers may argue otherwise: the question is how Puerto Rican, Puerto Ricans are (Grosfuguel, 1995).

This previous question is raised because Puerto Ricans, as well as other ethnic minorities groups, are pressured within the United States to accept everything that is American and to reject all things characteristic of their own culture (Torres,

1997; Urciuoli, 1996). The result is an internal conflict of identity that arises when the individual is asked to reject his or her cultural identity (Harmon-Jones & Mills, 1999). As a result of this pressure to conform to the standards of the new culture, the individual's total sense of self is diminished because it is so intertwined with his or her cultural identity that to separate the two can only result in extreme emotional distress (Kirmayer, 1996). Because this conflict is experienced by so many ethnic minorities (Marsella, Friedman, Gerrity, & Scurfield, 1996; Sue & Sue, 2003), the following questions must be considered: Is it possible for a person to maintain a solid identity structure throughout life in the face of drastic societal and cultural changes, or is a person's identity reshaped to accommodate these societal and cultural changes? Is identity like water, which remains constant in its molecular composition, but continually changes to accommodate the container, fluctuations in temperature and/or environmental conditions? In this article, we will attempt to answer these questions.

Traditional Theories of Identity Development

Jung, more so than any other developmental theorist, acknowledges the integration of complex and dynamic components of self as the person moves toward individualization and autonomy (Agnel, 1994; Bütz, 1992). However, Jung like other Western developmental theorists, believed that healthy development of self occurs as the individual eventually separates him or herself from the influence of culture (Miller, 1989). Jung's theory did not account for the need of some individuals to integrate their sense of cultural collectivism into healthy attainment of self (Bütz, 1992). Erikson (1968), on the other hand proposed a theory of identity development that considers cultural differences and acknowledges the influence of society on the development of the individual (Miller, 1989). However, Erikson describes identity development as occurring in a linear progression through a fixed sequence of stages in which movement is always forward. This concept of self, or identity development, fails to account for the possibility that development of identity may be a fluid, curvilinear, or nonlinear system (Bütz, 1992; Hoppensteadt, 2000), which we believe may be more characteristic of identity development among Puerto Ricans. If this is the case, counseling professionals who work with these populations may be need to consider how this possibility may affect the counseling process. That is Puerto Ricans as well as other Latinos/as living in the United States who have been affected by colonization are caught between ethnic self-designation and dominance (Comas-Díaz, 2001; Fanon, 1965). Because of the methodical rejection and subtle oppression of the two major Latino groups in the US (Puerto Ricans and Mexicans; Hu-Dehart, 2002) their ability to deal with identity conflicts has not been reach nor has been resolved. Meaning that because Puerto Ricans have no had the opportunity of no been their own independent nation, their ability to think from

outside of their colonial frame and see their own reality have been compromise (González, 1998; López-Baralt, 2001; Torres Rivera, Phan, Garrett, & D'Andrea, 2002).

Traditionally, counseling professionals have applied Western models of identity development to the counseling process, regardless of the cultural and ethnic characteristics of their clients (Ponterotto, Casas, Suzuki, & Alexander, 1995; Sue & Sue, 2003; Wehrly, 1995). In the case of Puerto Ricans this practice is known as extrapolation (Rodríguez Arocho, 1995). These models are based on traditional theories of identity development and assume that healthy identity development occurs once the individual has organized and integrated various components of personality into a unified whole. At this point, the person attains autonomy, individuality and a sense of separation from cultural influences. Attaining autonomy and individuality is viewed as a sign of achievement of healthy identity (Harriman, 1966). However, as appropriate as this model may be for clients who represent the dominant culture, it may leave unanswered questions about ethnic and racial influences on identity development and thus may not apply to Puerto Ricans who live in the United States and in Puerto Rico, particularly for those living in the United States. Because, of pressure on these individuals to conform to "American culture," they may, in fact, take a different path toward healthy identity development. This path may not be linear and sequential. Instead, because members of the Puerto Rican community who live in the United States experience a great deal of internal and external conflict, their path to healthy identity may be curvilinear, dynamic, nonlinear and characterized by perturbations as defined by chaos theory (Hoppensteadt, 2000).

Since human beings are constantly striving toward self-organization and balance, they seek to regain stability even in the face of personal and cultural crisis (Gusman, Stewart, Young, Riney, Abueg, & Blake, 1996). This may be illustrated by visualizing a rock being thrown into a body of water, such as a lake. Initially, the impact of the rock onto the water creates a disturbance, so that the system (the body of water) becomes briefly destabilized. However, after the initial disturbance, the system (the body of water) will organize itself without losing its molecular composition. The body of water is an example of an open system that continually strives to maintain balance and organization even in the case of severe disruption or disturbance. One theory that appears to provide a valid explanation for this tendency of a system to reorganize itself in the face of disruption is chaos theory. In chaos theory, the disruption of the system is known as *turbulence*, a condition that creates friction. Friction, in turns, creates energy that eventually dissipates or degrades the turbulence so the system reorganizes itself (Bütz, 1993). The constructs of chaos theory may be useful in social sciences to explain certain human developmental process, such as identity development, that may be temporarily disrupted by certain environmental stressors (Torres-Rivera, 1996).

Traditionally, in their attempts to understand the complexity of human behavior, social scientists (specifically psychologists, counselors, and other helping professionals) have often oversimplified human functioning (Sue & Sue, 2003). However, by oversimplifying a system as complex and dynamic as the human being, we may lose sight of important variables (Pedersen, 1988). One way to avoid this problem in our attempts to explain Puerto Rican identity development is to consider the process as dynamic and fluid instead of stepwise and linear.

Although all human beings experience a great deal of complexity in daily living, this complexity is magnified for ethnic minorities living in the United States because of the effects of prejudice, racism and discrimination (Bernal & Knight, 1993; Comas-Díaz, 2001; Oboler, 1995). Chaos theory may provide a better description and explanation of the complexity of ethnic minority identity development than traditional approaches (Wehrly, 1995). Thus, it is more likely to provide mental health professionals with the tools to understand and address the unpredictable patterns of the multicultural values and beliefs of ethnic minorities. Most traditional developmental approaches emphasize use of the scientific method of control and predict human behavior (Cziko, 1989). In contrast chaos theory is more in tune with the nonlinear thinking of members of ethnic minority populations (Torres-Rivera, 1996) whose identities may be shaped and reshaped by complex life experiences, which, frequently turn into turbulent, catastrophic, or chaotic events (Wilbur, Roberts-Wilbur, & Morris, 1992). In the next sections, the constructs of chaos theory are described and an explanation of the usefulness of the theory for exploring and describing the impact of nonlinearities on the dynamic system of ethnic minority identity is provided.

Chaos Theory and its Constructs

The roots of chaos theory can be found in mathematics and physics. While is not a precisely defined concept, essentially, chaos theory represents a system of differential calculus and equations that depict the patterns of nonlinear, complex phenomena and that calculate rate of change over time (Gleick, 1987). What one has to keep in mind, however, is that the notion of "chaos," for most people typically communicates thoughts of randomness and disorder. In truth, however, chaos theorists describe systems that behave orderly as well as disorderly, and as such, better represent complexity rather than uncontrollable mayhem (Wilbur, Kulikowich, Roberts-Wilbur, & Torres-Rivera, 1995). A system is said to be complex when there is a lack of complete predictability in the occurrence of events. The lack of complete predictability is attributable to a number of factors that are mathematical, nonlinear, and iterative (Wilbur et al., 1995).

According to Stickel (1992), chaos theory accounts for diversity, change, synthesis, and turbulence. Gleick (1987)

views chaos as a theory of process rather than state, of becoming rather than being. Gleick also describes chaos as a theory of global nature that takes a wholistic approach to understanding and describing. Hence, eliminates predictability and offers understanding (Kellert, 1993). As regards cultural identity, chaos theory does not omit theories of cultural identity that have a provision for the "nigrescence process" which accounts for periods of disequilibrium, confusion, and dissonance (Dana, 1998). Most of these theories regarding ethnic minority cultural identity development assume that when individuals begin this process they are at a recognizable stage. This is not the case of the Puerto Rican people as they are still under colonial domination and their identity development still in its forming stages (González, 1998). Consequently, the constructs of chaos theory, then, may provide a metaphor to help illustrate some of the more complex features of human behavior, such as identity. These constructs seem most appropriate, as well, for understanding the unique experiences of minorities that have shaped and reshaped their concept of self. The specific constructs of chaos theory that have relevance for understanding the concept of self/identity includes: sensitive dependence on initial conditions, turbulence, phase space, iteration, dissipation, fractals, and strange attractors (Gleick, 1987; Stickel, 1992).

Sensitive Dependence and Feedback

The construct of sensitive dependence on initial conditions assumes that small variances will multiply and later magnify to the point of chaos, or crisis (Stickel, 1992). In chaos theory, this is known as the "butterfly effect." That is, if a butterfly flaps its wings in the air in China, this small motion eventually may be magnified to the extent that it creates weather changes somewhere in America. If we apply the construct of sensitive dependence on initial conditions to Puerto Rican identity development, which is influenced by individuals' perceptions and experiences, these perceptions and experiences create loops of information or feedback, that may throw one's self-perception, or identity, off balance in ways that at times may seem chaotic (Van Eenwyk, 1991). Metaphorically, we may visualize identity as water in a casserole and sensitive dependence as heat of a stove. As the heat increases, the water in the casserole in an attempt to maintain equilibrium will eventually boil and may change into vapor, but the molecular composition remains constant. Just as the water in the casserole reacts to the stove's heat by changing its shape, the individual's self concept or identity, constantly changes in reaction to a lifetime of experiences.

For the Puerto Rican people initial conditions were set when the first Arawaks or Taínos settled on the island of Puerto Rico (Boriquén) (Gómez Acevedo & Ballesteros Gabrois, 1978). Furthermore, when we take a close look at each of the four major influences to the today's Puerto

Rican identity in the next sections, we may be able to see how each one influences the Puerto Rican sense of self differently. It is also using this construct that we are able to see that Puerto Rican identity is far from completion. The following cultures are seen as generating sensitive dependence on initial conditions for Puerto Rican identity.

Taínos. Initially we must examine the native inhabitants of the island as an influence over present Puerto Rican culture and ethnic identity. However, no two authors on Puerto Rican matters share the same point of view about the relative influence of the Taínos on today's Puerto Rican culture (Díaz Soler, 1994; Fitzpatrick, 1987; Silén, 1973; Sued Badillo, 1989). Probably one of the reasons for this disagreement is the lack of empirical evidence about Taíno culture. Another reason may be the extinction of the Taínos, 100 years after the colonization of the island by the Spaniards (Burdette, 1976; Silén, 1973; Sued Badillo, 1989).

Nonetheless, there is some agreement among Puerto Rican intellectuals, in particular Puerto Rican Nationalists, that the Taíno culture is, was, and will always be a major influence on the Puerto Rican culture (Díaz Soler, 1994; Gómez Acevedo & Ballesteros Gabrois, 1978; Scarano, 1993; Silén, 1973; Steward, Mamers, Wolf, Padilla Seda, Mintz, & Scheele, 1972; Sued Badillo, 1989). Its contribution can be seen in Puerto Rican's concern with spiritual matters (Torres-Rivera, 2004); language (Ex. More than 75% of all town and city names are of Taíno origin); eating habits; and in the dances, where dancing while singing was a Taíno custom that is still very popular in contemporary Puerto Rico (Díaz Soler, 1994).

Africans. African heritage was and is more influential than Taíno heritage in contemporary Puerto Rican culture and ethnic identity (Steward, Mamers, Wolf, Padilla Seda, Mintz, & Scheele, 1972; Díaz Soler, 1994). Africans presence has been felt for centuries in Puerto Rican culture, even though this ethnic group was subject to slavery (Díaz Soler, 1994). Nonetheless, the contribution of the African heritage to the Puerto Rican culture is somehow denied and at times even omitted by some historical and literary sources (Blanco, 1975; Díaz Soler, 1981; Sued Badillo & López Cantos, 2001; Zenón Cruz, 1975).

Díaz Soler (1994) pointed out that African culture has made an important contribution to language, although probably not as influential as that of Taínos. In music and dance, the "bomba" and "plena" are identified as the most popular music legacy of African roots. Africans also brought with them a sense of collectivism that provides the Puerto Rican people with a sense of community and family orientation. The African element, different from the Taínos, is a more recent phenomenon going back to the XVI century, which is a very active influence in today's Puerto Rican culture (Sued Badillo & López Canto, 2001). The mixture of African religion, Taíno spirituality, European spiritual beliefs and Catholicism evolved into the

“espiritismo” that many Puerto Ricans still practice as their main religious faith (Díaz Soler, 1994; Torres-Rivera, 2004).

Spaniards. The group with the most influence on Puerto Rican culture is the Spaniards. Puerto Rico’s colonizers, were mostly men younger than those who colonized the rest of Latin America, single, from Andalucía, of lower socioeconomic status, and artisans or skilled workers by occupation (Scarano, 1993). The Spaniards came with a *conquistador* mentality and as such they acted, imposing their will on the Taíno when they first arrived and later on the African cultures that they brought to Puerto Rico as slaves (Díaz Soler, 1994). The Spaniards who arrived in Puerto Rico did not care about any other ethnic group, other than themselves. Their only goal was to be rich at everyone else’s expense. Therefore, they resorted to theft, stealing, cruelty and contraband (Díaz Soler, 1994). Interestingly, the Spaniards also wanted to “civilize” the natives by bringing christianity, and hope to the Americas. This created a sense of confusion and contradiction between their actions and their intentions (Díaz Soler, 1994).

Nonetheless, the Spaniards contributed a deep consciousness of family membership to Puerto Rican culture. This is evident in the language, the religion, and many of the customs (Fitzpatrick, 1987; Larsen, 1973). Fitzpatrick (1987) stated, “The great influence in the past and present on all levels of Puerto Rican family life was the Spanish colonial culture” (p. 78). Puerto Ricans based their confidence, sense of security, and identity on their relationship with members of their family (Fitzpatrick, 1987; Steward, Mamers, Wolf, Padilla Seda, Mintz, & Scheele, 1972). One evidence concerning the importance of the family is the use of the both parents’ surnames for children (Fitzpatrick, 1987; McGoldrick, Pearce, & Giordano, 1996).

The Spaniards also brought their eating habits to the island. Spaniards love rice and beans; therefore they combined Taíno traditional food with their Spanish taste, to give way to traditional Puerto Rican food such as rice and beans, *serenata*², *sancocho*³, rice and pigeon peas (Díaz Soler, 1994). Last, but not least, is *compadrazgo*. *Compadrazgo* means that, under the Catholic faith, the witnesses of a child’s baptism become his/her godparents, and the *compadres* of the child’s parents. *Compadrazgo* constitutes a network of ritual kinship, as serious and important as natural kinship (Fitzpatrick, 1987).

United States. The influence of United States colonization on Puerto Rican culture is obvious in terms of economical, political, and social conditions (Carrión, 1993; Dietz & Pantojas-García, 1993; González, 1998; Meléndez &

Meléndez, 1993). This group, by the virtue of its indirect and direct domination of Puerto Rico and its government, has had the major influence on contemporary Puerto Rican identity (Fanon, 1965; Fernández, 1994; González, 1998; Meléndez & Meléndez, 1993; Memmin, 1996; Rivera Ramos, 1993). The pressure imposed by United States on Puerto Ricans to adapt/assimilate into their culture has created confusion, dissonance, and is one of the major sources of turbulence for the Puerto Rican identity (Fanon, 1965; Fernández, 1994; González, 1998; Meléndez & Meléndez, 1993; Memmi, 1996; Rivera Ramos, 1993).

As one may be able to see through the application of the construct of sensitive dependence on initial conditions, chaos theory allows counselors to describe Puerto Rican’s identity at the time he/she enters the counseling process and to map the client’s multidimensional changes in identity that occur as the individual experiences life’s complex events (Gleick, 1987; Wilbur et al., 1995). Counselors who apply this construct should gain better grasp of the Puerto Rican’s ever-changing worldview.

Phase Space

In chaos theory, phase space refers to all that is known about the particular characteristics of a given system at a specific point and, according to Stickel (1992) is “composed of as many variables as needed to describe a system’s movement” (p. 4). An appropriate analogy might be that of a snapshot of a person or a place, which freezes a moment in time. When applied to the counseling process, the construct of phase space refers to all that is known about a client, as a dynamic system, which can be collapsed to a single moment in time (Stickel, 1992; Wilbur et al., 1995). Thus, the only assumption that can be made about the particular client’s identity is an interpretation of that person’s identity as it exists at that exact moment. The counselor may make no assumptions about either the client’s past or future behavior. However, during the counseling process, the counselor can examine various phase space attributes to gain clearer understanding of the dynamics of identity change in the client. In the case of Puerto Rican clients identity this construct will help the counselor to understand that due the number of exterior and internal influences imposed by political, economic and/or social stressors they will be in transition almost all of the time.

Iteration

The construct of iteration refers to a series of feedback and feedback loops out and into a system. Van Eenwyk (1991) applies the construct of iteration to chaotic systems when he states that “Chaotic systems alternately stretch and fold back on themselves in self-reinforcing loop, like feedback in a microphone speaker system” (p. 42). Another similar description of iteration is that of Stickel (1992), who describes the construct as the repetitious operation of the

² Serenata is a salad with bacalao (codfish), avocado, tomato, onion and olive oil.

³ Sanchocho Puerto Rican stew is a hearty combination of beef, pork and various root vegetables.

same function using previous output as input (feedback) for the next operation. Thus, according to chaos theory, even though a system may be observed at a single point in time (phase space), it is important to understand that the system is, at the same time, dynamic and in perpetual change and thus may not be the same exact system over time. Denise Coppa (1993) provides a good example of the application of iteration in human systems in her description of the outcome of a conversation between two health professionals overheard by two different patients who misconstrue the meaning of the words spoken:

"Each in turn discusses their understanding with two people who assign their own meaning and pass it to two more each. It is easily seen how different the meaning of the final conversation is from the original" (p. 988).

The construct of iteration may be useful in the counseling process to help the counselor understand that identity development is nonlinear, dynamic and in constant change. Because of complex interaction, feedback provided to the client by the client him- or herself results in constant fluctuation and modification of self-perception, or identity. Thus, because of iteration, the picture that the client portrays on a given day may not be the same picture on another day. Over time, however, these separate pictures, or snapshots, eventually may be organized into a panoramic overview that will provide the counselor with a more complete understanding of the complexity of the client's identity. In the case of Puerto Rican clients, this construct can be used to understand the complexity of language and how language can and does affect one's identity. That is, language is interpreted by the dominant culture and in doing, that the dominant culture dictates that code switching and speaking with an accent is speaking "bad English," therefore, being less than an American (Torres, 1997; Urcioli, 1996). Again giving conflicting feedback messages to those speaking with a different sound, structure and frame of reference. This notion is supported by a number of studies that suggest that language and communication patterns are strongly related to thinking patterns and people's worldviews (Gross & Miller, 2002; Kaplan, 1989). Furthermore, evidence has been presented that supports the notion that the language a person is thinking in will have direct impact on his/her thought process (Boroditsky, 2001; Gross & Miller, 2002). Therefore, it is contended that chaos theory may allow counselors to understand the differences in relationship to the clients' abstract thinking and the conflict that may arise due to language differences.

Turbulence

Turbulence in chaos theory terms refers to disorder in all scales within a system (Gleick, 1987). For example, in the case of a liquid system, turbulence occurs when the liquid reaches either a boiling or freezing point. The turbulence results from the liquid's interaction with the environment and may change the form of the liquid. However, the structure, or molecular composition of the liquid, does not change. When

chaos theory is used to describe the counseling process, turbulence may be thought of as individual crisis (Hackney & Cormier, 1994). However, chaos theory not only considers individual systems but also considers social systems and the interaction between the two (Wilbur et al., 1995). Thus, the counselor who works with Puerto Rican clients in crisis must be sensitive to the fact that the individual, while in personal crisis, is also part of larger complex, nonlinear social systems. It is the interaction between the individual and the social system that most likely has created the crisis, or turbulence (Parnell & Vanderkloot, 1991). This interaction must be recognized for the client-counselor relationship to be effective.

Strange Attractors and Fractals

Fractals and strange attractors are two additional constructs of chaos theory that may be borrowed by mental health professionals. These constructs have received a great deal of attention by practitioners in many fields. Even school age children find them interesting because of the advent of high-speed computers that graphically, and beautifully, display the complexity of irregular geometry associated with fractals (Torres-Rivera, Smaby, & Maddux, 1996; see Gleick, 1987, for several computerized images of fractals). This irregular geometry is not of the sort described by Euclid, as it depicts shapes such as tree leaves and clouds that cannot be fully appreciated in whole dimensions such as two dimensions or three dimensions. Rather, it represents fractional or fractal dimensions within which a point never returns to its original position (Gleick, 1987). Whereas the point in Euclidean geometry remains stable and static, the successive iteration of a fractal results in a point that jumps about erratically within restricted regions of phase space. The complexity and detail of the phase space emerges because the number of iterations are infinite, indicating that points could be mapped indefinitely within what would appear to be a restricted region of space, yet one so complex that no two points occupy the same space.

A strange attractor occupies the phase space and acts as if it were a magnet around which the fractal point moves. It is the interaction between the strange attractor and the fractal point that produces the irregular and apparently chaotic fractal pattern. However, there also is order among this apparent disorder. An example might be the seemingly chaotic design of a computer screensaver display, which, if observed long enough, appears to follow some sort of order.

The tendency of a system to bring order out of apparent disorder may be applied to the notion of identity. If we think of the fractal as a partial representation of a client's total identity (Torres-Rivera, 1996; Wilbur et al., 1995) and the counselors' ability to understand and respond to that identity as the strange attractor, then these constructs become useful in the multicultural counseling process. At any point in the counseling process, the counselor observes the client's phase space at a frozen moment in time. Within this phase space is a fractal that represents a tiny segment of the whole picture of the client's

identity system. Between counseling sessions, as the person, goes out into the environment and then comes back, a different picture of the person, or phase space is presented to the counselor. Now the fractal within the phase space has changed so that the counselor views another tiny segment of the person's identity, but a different view of it this time. The core of the person's identity has not changed (the molecular structure is the same), however, the changes based on the client's experiences in the environment. Thus, just as in the case of the boiling water in which the continual movement of the water, or turbulence, is an attempt to gain equilibrium in temperature, strange attractors and fractals interact in a living system in a such of way that organization is the outcome (Briggs & Peot, 1980). Thus, when chaos theory is applied to the multicultural counseling process, mental health professionals' gain a better understanding of the client's various patterns of identity development. When this occurs, counselors can validate and thus become more understanding of minority client's complex life experiences.

Dissipation

All turbulent systems are considered dissipative systems in that they degrade energy from more usable forms, such as electricity, into less usable forms of energy, such as heat. The relationship among energy forms is mostly dependent on friction. However, what makes the exchange of energy chaotic is that friction cannot be assigned a constant value as it, in turn, depends on the speed of particles or objects.

We may use these examples from physical science to describe human interaction. One such interaction occurs in the communication process. In this process, an exchange of energy occurs between two parties. Usually, during the communication process, one party or the other party creates friction. For example, in the client-counselor relationship, if the client speaks English with an accent or if the counselor misinterprets the message the client is attempting to deliver, then friction occurs and an inevitable breakdown in communication will result. However, the stronger the friction, the faster dissipation will occur. Thus, communication (energy) -> conflict (friction) -> breakdown in communication (dissipation). From the chaos perspective then, conflict, turbulence, and movement from stabilization to destabilization (dissipation) between mental health professional and client, and in human interactions in general, are inevitable (Wilbur et al., 1995).

Liquidity of the Puerto Rican Identity

A metaphor appears as the most appropriate construct to explain the concept of liquidity about Puerto Rican identity. Lets assume that the Puerto Rican identity is like a creek, in which the Taíno culture was the first flow of water. At the beginning it was steady without much turbulence (see Figure 1; Kellert, 1993). When the Spaniards arrived they added more water and velocity to the creek, creating some turbulence (see Figure 1b). As the working force declined, with the

disappearance of the Taíno culture, the Africans were brought to make up for that lack of personpower. This culture added more velocity and/or water to the creek. This added force created more turbulence (see Figure 2a). Later, the creek velocity increased by the influence of United States colonization which added even more force to the already overflowed identity

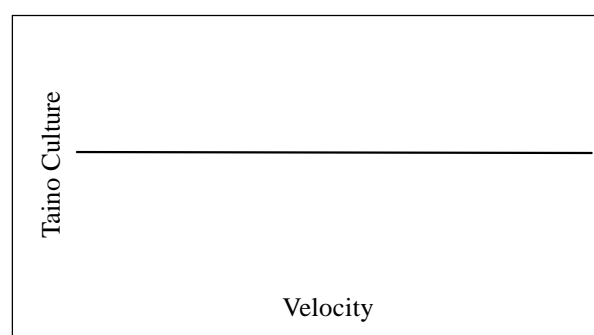


Figure 1a. Illustrates the steady flow of the Taíno Culture

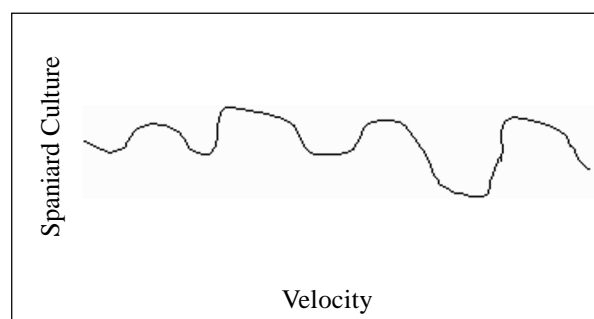


Figure 1b. Illustrates the periodic flow of the Spaniard and Taíno Cultures

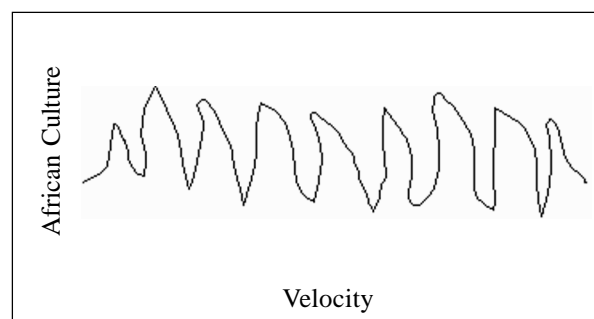


Figure 2a. Illustrates quasiperiodic flow of the African, Spaniard, and Taíno Cultures

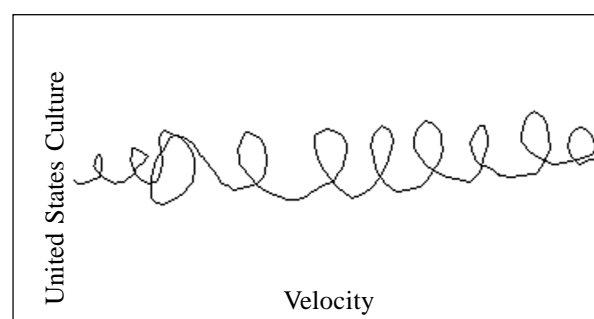


Figure 2b. Illustrates quasiperiodic flow of the African, Spaniard, and Taíno Cultures

of Puerto Rican (see Figure 2b). The flow of velocity measurements over time changes from constant or steady to periodic and quasiperiodic behavior (Kellert, 1993). The transition to turbulence can be explained by the appearance in state space of an attractor (i.e., African culture, United States culture and/or events such as discrimination or racism) that represents very complicated dynamic behavior in identity, yet could and can be described by a very simple set of mathematical equations (Hoppensteadt, 2000; Kellert, 1993).

Clinical Applications

Because its theoretical constructs can be taught and translated into practice chaos theory is useful for the practice of multicultural counseling. Mental health professionals who apply chaos theory to their practice come to understand that Puerto Ricans who are American citizens in the United States and in Puerto Rico are subject to a different set of expectations, experiences and treatment than individuals from the dominant culture. Moreover, mental health professionals who use chaos theory as a foundation for working with ethnic minority clients do not expect linear (cause - effect) outcomes from the counseling process. Instead, the chaos-based practitioner understands that identity development is a dynamic, constantly changing phenomenon (Bütz, 1992) and recognizes that the client's life experiences are valid and an integral component of identity.

Chaos theory offers an approach for working with Puerto Rican clients, that is different from approaches based on more traditional developmental theories. These theories are based on the intrapsychic model and rely heavily on the client's taking personal responsibility for change. Even if environmental stressors are severe in the client's experiences, the individual is viewed as solely responsible for his or her problems and is required to overcome these stressors through individual effort and work. Chaos theory on the other hand takes into account the complex interaction of environmental influences and life experiences, and the ability to maintain integrity in the face of adversity. Chaos theory further suggests that clients come to us and offer a perfect picture of where they are at that given moment. It is immediacy in the relationship that is important for mental health professional to understand. In chaos theory it is more important to describe than to predict. Survival and the ability to maintain one's integrity and sense self cannot be based simply on predictability.

In summary, the relevance of Chaos theory to the understanding of Puerto Rican identity, especially in regard to multicultural counseling, may be explained as follows:

1. Systems are complex and dynamic; theories that oversimplify these dynamics take away from the reality of these systems. Chaos theory may provide a better explanation of the reality of the living systems of Puerto Ricans, without over-simplifying the complexity of the elements involved in those systems.

2. Systems of values and beliefs are in constant change and transformation therefore; identity is also in constant change. Chaos theory allows the flexibility needed to describe and explain those changes and transformations over time, and at different points in time.

3. Life experiences shape and reshape identity; in many instances, life experiences change and transform identity into periods of chaos. Chaos theory offers a description and understanding of those chaotic periods.

4. Puerto Ricans in United States as well as those living on the island have learned how to survive within the complexity of another culture, without losing either their personal integrity or sense of the value of their own culture. These complex survival skills, values, and beliefs are often intuitive, nonlinear, and dynamic. Chaos theory may be the best approach to understand these skills, values, and beliefs within the context of the multicultural counseling process.

Conclusions

Identity has been the most important problem when dealing with all ethnic minorities in the United States and Latinos in particular (Comas-Díaz, 2001; Sue & Sue, 2003). In Latin American a trend has been developing for sometime now, in which native people finally have been allowed to claim their native roots; a process that Warren (2001) called "Posttraditional." The process refers to native people looking at native tradition, or whatever is left of what native tradition was, as a point of reference to claim their native identity (Warren, 2001). Similar movements can be found among the Puerto Rican people to claim their identity, however, the difference among the Puerto Rican people is that Puerto Rican identity is not stable (González, 1998). Colonialism of the Puerto Rican people continues, creating a dynamic system influenced by U.S. attempts to "civilize" Puerto Ricans (i.e., the case of Vieques⁴). This constant force maintains Puerto Rican identity as a dynamic and unstable system. Thus, chaos theory may be the most useful theory to investigate and understand this system (Bütz, Chamberlain, & McCown, 1997).

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⁴ Vieques is an island-municipality right off the eastern coast of Puerto Rico. In 1938, the US Navy began using the island-municipality for military practices. In 1941, during the height of WW II, the Navy initiated a campaign of forced expropriation of territory, which ultimately ended in their possession of over two thirds of the island's. Resident of Vieques have been fighting the Navy ever since. On May 1, citizens in Vieques celebrated the first day in over 60 years without a US Navy bombing run (Vieques Libre, 2002).

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