GLOBAL JOURNAL OF
Community Psychology Practice
PROMOTING COMMUNITY PRACTICE FOR SOCIAL BENEFIT

Theories in the Field of Community Psychology

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Keywords: Theory, Science, Community Psychology, Framework

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Authors’ Notes: Our thanks to John Light, David Glenwick, Richard Boyd, Diana Ohanian for their helpful comments and suggestions. We appreciate support from the National Institute on Alcohol Abuse and Alcoholism (Grant R01AA022763), the Eunice Kennedy Shriver National Institute of Child Health and Human Development (Grant R01HD072208), and the National Institute of Allergy and Infectious Diseases (Grant R01A1105781).

Recommended Citation: Jason, L.A., Stevens, E., Ram, D. Miller, S.A., Beasley, C.R., Gleason, K., (2016). Theories in the field of community psychology. *Global Journal of Community Psychology Practice, 7*(2), pages 1-27. Retrieved Day/Month/Year, from (http://www.gjcpp.org/).

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Theories in the Field of Community Psychology

Abstract

In this article, we review some of the key attributes of useful theories and assess whether these attributes are present in several prominent Community Psychology theories. The field of Community Psychology often deals with complex systems and attempts to create change through the use of multiple mechanisms. It has provided researchers new ways of thinking about contextual factors and how participants could be more involved in research efforts. However, this field has encountered significant challenges in testing and evaluating theories that involve system-level environmental change. It has struggled to establish consensus when operationally defining criteria and when creating reliable instruments for measuring theoretical constructs. We conclude that Community Psychology theories have tended to function as frameworks, which indicate important elements to examine, but do not specify relationships that can be used for explanation and are, therefore, too broad to make the types of predictions characteristic of science. Because Community Psychology theories have often served as orienting frameworks, there needs to be more discussion about their usefulness, and whether community psychologists can develop more rigorous and specific theories. This has implications for formulating various practices and for discussions about how future research can better inform theory.

Theoretical issues abound in many areas of psychology. Meehl (1978, pp. 806), one of the more vocal advocates of the importance of theory, has stated: "most so called theories in the soft areas of psychology (clinical, counseling, social, personality, community, and school psychology) are scientifically unimpressive and technologically worthless." While this stance reflects a positivistic approach to psychology that is not necessarily embraced by all community psychologists, the charge is worth consideration nonetheless (Kloos, Hill, Thomas, Wandersman, Elias, & Dalton, 2012). It would be useful for the field to have a clear, shared understanding around the use of the term "theory" and when and how it applies to the work that we do. It is in this spirit that we explore some of the key "theories" used by community psychologists in order to assess whether or not they fit within the concept of theory as traditionally defined in scientific inquiry. In order to do this we must first trace the definition and use of the idea of "theory" in these terms and then we must determine which of them within the field of community psychology might be fruitfully analyzed using this rubric.

Defining and Using Theory in Scientific Inquiry

According to Kerlinger (1986), "A theory is a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting phenomena" (p. 11). A hallmark of the scientific process is the development and testing of theories, and, consequently, those disciplines without good theoretical foundations are often seen as less rigorous or less valuable to the larger scientific community. Theories allow data to be organized, systematized, and interpreted. Some would argue that without theories it is harder to achieve progress towards useful accumulated knowledge. McAdams and Pals (2007) state that: "Theory is at the heart of science" (p 3), and Feynman (1997) believes that if academics are not engaging in theoretical work, their contributions are best

categorized as an engineering endeavor rather than true science.

Of course, others would disagree with Feynman's (1997) assessment. In the field of medicine, for example, much occurs that is practical and contributes to the larger mission of both patient care and the development of new therapeutic methods. In fact, many medical discoveries such as the discovery of penicillin, which began the modern era of antibiotic development (Colebrook, 1956), are the result of serendipity rather than programmatic theory-tested experiments. However, even within the more applied disciplines such as medicine, there are implicit theoretical models. For example, theoretical models regarding cell function, cell growth, and biochemical change have allowed scientists to develop interventions for a number of neurodegenerative diseases (Sheikh, Safia, Haque, & Mir, 2013). Though there are distinctions between those who practice medicine and those whose research explicitly wields theory, many believe theories apply to both types of activities and, more importantly, are the driving force for innovations. It is even possible to argue that in any research or clinical practice, there is always a theoretical model in operation.

Criteria for Evaluating Theories

Theories serve three purposes—describing, explaining, and predicting phenomena (Jiang, 1998). First, theories are used to describe a phenomenon. These descriptive processes are then used to explain why the phenomenon occurs, and this explanatory framework is then used in making inferential predictions. A well-formulated theory should also be able to explain the phenomena of interest and posit under which circumstances and conditions (people, settings, and times) a given set of propositions should apply. This provides a better understanding of the phenomenon of interest and allows for a more critical analysis. For example, Affective Events Theory (AET; Weiss & Cropanzano, 1996) posits that affective behaviors (e.g., citizenship behaviors such as courtesy, conscientiousness, and sportsmanship) are directly related to affective experiences, while judgment-driven behaviors (e.g., leaving a setting) are indirectly related to affect through the attitudes (e.g. satisfaction and commitment) formed by such experiences. This distinction is a critical part of understanding the relationship between affective events and behavior, and this theory has been fruitfully applied to community settings (Beasley & Jason, 2015).

According to Reichenbach (1938), there is a distinction between the context of discovery and the context of justification. In the context of discovery, people describe what they have stumbled upon; whereas in the context of justification, they make predictions and then test these ideas in order to prove or disprove them. Indeed, the prevalent practice of generating hypotheses and theories after the data have been analyzed (known as HARKing; Hypothesizing After the Results are Known; Kerr, 1998) has received quite a bit of critical attention. In these circumstances it is possible that one is only explaining phenomena through the lens of what is already known. Feynman (1997) has described good science as a process of "bending over backward to show oneself wrong." With HARKed theoretical explanation, there is an absence of such "bending over backwards." As an approach to inquiry, it leans towards affirmation, risking a result that simply confirms what a researcher already believes to be true. This is reminiscent of Meehl's (1967) argument that psychologists' reliance on post-hoc explanation of why phenomena did or did not occur obscures the field's ability to assess why people function as they do. To counteract the bias of HARK, some researchers suggest that theories need to be: 1) articulated (and perhaps hypotheses even registered *before* research is conducted) - this is akin to Nozek and Bar-Anan's (2012) concept of Open Science and 2) tested *a priori*

so that one can see whether or not any given theory acts as a valid "inference ticket" for human phenomena.

It should be noted that some have raised important concerns regarding the classic context of discovery/context of justification distinction (e.g., Hoyningien-Huene, 2006), but even while questioning the merit of such an unambiguous binary divide, most would still recognize the need for "a distinct normative perspective that aims at the evaluation of scientific claims" Hoyningien-Huene, 2006, p. 130). A major aim of this article is to attempt to apply some "normative perspective" regarding the use of theory to work in the field of Community Psychology and to generate what we hope will be a productive conversation around such aims.

One such normative criteria often used in science is that good theories need to offer clear predictions regarding what should happen with new data, and these predictions should be capable of being rigorously tested and falsified (Popper, 1968). According to Borsboom (2013), "A good scientific theory allows you to infer what would happen to things in certain situations without creating the situations…Theories should be interpreted as inference tickets." Otherwise, a theory is too broad to make the types of predictions characteristic of science. In making predictions about new data, theories provide insight into how human behavior works in systematic ways. Ultimately, theories are part of the process where observations become evidence for generalizable knowledge, which can have useful applicability. Theories also deal with falsifiability and utility (Bacharach, 1989; Huber, 2008; Van de Ven, 1989).

Finally, when using theories in research, investigators need to assess the applicability of a theory within a variety of contexts in order to describe the boundary conditions in which the theory predictions hold or do not hold. For example, under classical conditions, the theory of gravitation is correct. But, gravitational theory does not apply at quantum distances or extremely high energies—that is, there is no theory of quantum gravity. Gravity applies very nicely when predicting motion of objects, but not under all conditions (i.e., air resistance of a dropped object must be considered). While the boundaries of the theory of gravitation seem quite obvious in this example, analogous boundaries are not always as clear in the theories often used in the field of Community Psychology. Consider learning theory. Skinner (1971) asserted that reinforcement is a key component of learning in both humans and pigeons. However, when attentional capacity is limited (e.g., by serious head injury, overwhelming environmental stimuli, intense emotional states), learning may not occur in the same manner. It is difficult to train pigeons to fight adversaries, as they may be evolutionarily hardwired for flight rather than fight.

Boundary conditions are one of the ways theories can be a basis for progress, and part of such advancement involves developing better understandings of when and how a theory does and does not apply to particular settings and circumstances. If Bowlby (1969; 1980) had not proposed a clear theory that allowed for predictions and experimentation, Ainsworth would not have made her discovery about boundary conditions. Bowlby's (1969; 1980) influential Attachment Theory within developmental psychology postulated that a relationship with a stable consistent caregiver is important for emotional development. Ainsworth and Bell (1970) tested this theory by observing parent-child interactions, and noticed that not all children reacted to separation from and reunion with their parents in the same manner. The relationship between children and their parents plays a significant role in children's feelings of security. In other words, the theory did not apply universally and boundary conditions related to individual differences existed. Although the primary purpose of theory is to explain current

phenomena and predict how things may behave in the future, some have used theory to explain and understand past events. There are other sets of criteria for theory assessment, that are beyond the scope of this paper such as importance, precision and clarity, parsimony and simplicity, comprehensiveness, operationality, empirical validation or verification, fruitfulness, and practicality (Patterson, 1986).

Clearly defining theory in this manner is important because often "theory," "model" and "framework" are used interchangeably; however, there are important differences in these concepts (See Figure 1). A framework informs researchers of the types of elements that are considered important avenues of investigation. It largely performs the descriptive function of a theory with limited explanatory and/or predictive qualities. A well-known example is Bronfennbrenner's (1979) framework, which is made up of macrosystem, mesosystem and microsystem elements. However, because the terms macrosystem, mesosystem, and microsystem are not specific, the framework does not make predictions. In other words, without further refinement, this framework does not specify relationships that can be used for explanation and prediction. Therefore, a framework could be described as a set of orienting principles which, however, require more specific definition, operationalization, and so on, in order to be applied in any given research or other circumstance. For example, Bronfenbrenner's (1979) framework can be used to specify and operationalize the proposition that proximal systems are likely to have greater impact on individuals than distal systems and investigations targeting these different levels of impact could be used to evaluate this very point. However, as it stands the framework itself simply points to multiple levels of influence. If researchers look backwards, Bronfenbrenner's ecological systems framework does seem to describe how some social systems work, but it is not specific enough to be testable in a rigorous sense. Within one framework, often multiple theories can be derived, and often each theory might have several different models and accompanying hypotheses (See Figure 1).

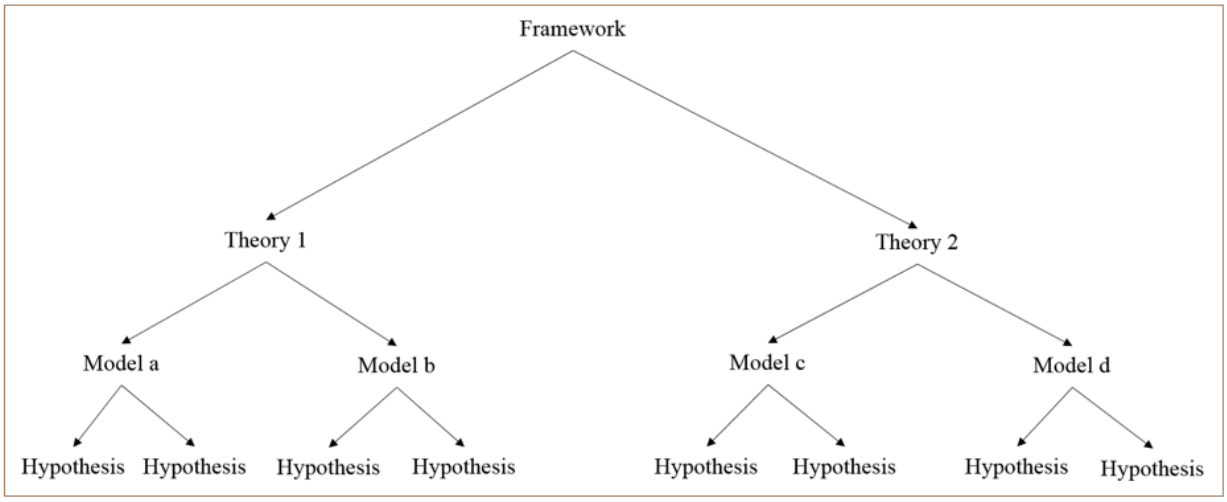

Figure 1. Relationship among one framework, which might have several theories and models NOTE: There may be one or more hypothesis within each model. In this figure for the sake of simplicity we only list two hypotheses per model.

In the interests of clarity and consensus about the use of these terms within the field of Community Psychology, we intend to explore some of the classic "theories" which have been much beloved in the field. We consider the question of whether these theories might

be more productively classified and used as frameworks because they lack the ability to aid with the operationalization and prediction inherent to a definition of theory as classically used in scientific inquiry. Frameworks are certainly important and useful, but thinking through how we as a field can more explicitly flesh out these frameworks into sets of testable theories would go a long way toward making significant progress in understanding complex systems and the contexts in which people live their lives.

Community Psychology

Before applying this rubric to the major theories put forth in the field, it is important to situate the philosophy of science outlined above (and its core definition of theory) within the context of Community Psychology and practice. Community Psychology emerged about 50 years ago. As the field evolved, certain recurring themes also emerged: emphasizing prevention over treatment, highlighting competencies over weaknesses, collaborating across disciplines, exploring ecological understandings of people within their environment, promoting diversity, and focusing on community building as a mode of intervention (Moritsugu, Vera, Wong, & Duffy, 2013). These concepts focused on new ways of thinking about contextual factors and how participants could be more involved in research efforts. These concepts also concentrated more on public health systems and preventive approaches (Kloos, et. al., 2012). At an influential community methods conference, Tolan, Keys, Chertok, and Jason (1990) responded to a multitude of issues facing the field of Community Psychology, and introduced a dialogue regarding criteria necessary to define research of merit as well as methodological considerations in implementing ecologically-driven research. Participants at this conference appealed for the careful construction and testing of theory in community research (p. 226). A later Community Psychology methods conference explored the gap in the scientific knowledge and practice of community based research methodologies emphasizing participatory research (Jason et al., 2004). Theories of context and action for social change (Lewin, 1946; Vygotsky, 1981) have been part of the Community Psychology field from its inception and continue to be utilized [e.g., Seidman's (1988) theory of social regularities in social settings].

Community Psychology was founded as a discipline that is intended to combine a scientific orientation with collaborative social action in order to empower members of some community of interest and to help them improve their lives. This orientation results in some important differences between the "hard" sciences and Community Psychology, in that it takes account of the fact that humans are cognitive, agentic units, and cannot be acted upon as though they were inert objects. This implies that some level of collaboration will always be required to institute social change. Additionally, this orientation has also sensitized the field to a need to listen to social actors, rather than to prescribe to them, which in turn has led to many insights regarding what life is like from the point of view of community members. However, these goals might run the risk of subordinating some potentially very important aspects of scientific development, including the development of theories capable of effectively describing, predicting, and explaining important phenomena.

It is possible to think about different fields of psychology as having different goals. For example, developmental psychology aims to document and understand the changes in humans across the lifespan. The goal of Community Psychology has been expressed as an attempt to understand the ways that altering specific human contexts (and perhaps the relationship between people and their contexts) alleviates human suffering. Although much of the explanation of individual difference "to date" has focused on genetics/nature and accumulated

experience/nurture, there may also be a significant amount of variance that can be accounted for by our interactions with our *current* environment. Community Psychology has much to contribute to this area, both in terms of theories to describe the impacts of context and environment, as well as reliable and valid measures to capture these complex phenomena.

Perspectivism

The definition of theory described above springs largely out of a traditional Western philosophy of science. Not all community psychologists subscribe to this kind of logical empiricism as their guiding philosophy of science. In fact, many community psychologists focus on the idea that we need to identify and understand multiple perspectives on reality. This involves understanding the importance of multiple contexts including gender, race, age, sexual orientation, religion, and disability status. However, if taken to the extreme of considering each ecological setting to be unique with its own history and varying influences (as can happen with pure constructivism), there may be no generalizable principles that can be extended across settings (Trickett, Watts, & Birman, 1994). An assumption of science is that there are some regularities in the world, and they are often stationary enough to have generalized meaning. If the randomness of diversity dominates human and community behavior, then theories have low value. However, as Tebes (2005) points out, understanding how and why people's perspectives differ and the situations in which perspectives arise allows a place for science and for conceptualizing theoretically in conducting scientific research.

Our definition of theory is largely couched in language of empiricism, but there are important reasons to consider other scientific perspectives, especially given Community Psychology's goal of examining context. For Tebes (2012), perspectivism suggests that all knowledge is dependent on the observer's point of view, is imperfect and incomplete, and is subject to social and cultural influences. According to perspectivism, our knowledge emerges out of active engagement with the world. Therefore, if there are multiple perspectives on "reality", it may be best to simultaneously examine multiple theories. Some ethnomethodologists and phenomenologists in the field of sociology would even go as far as to suggest there is no "science of human behavior" (Ashley & Orenstein, 2005). Indeed, a sociological approach to critiquing knowledge can help us understand power, oppression, and action (Berger, 1977; Merton, 1968; Strauss, 1997), recognizing that knowledge is both incomplete and dependent on culture and context. Consequently, this raises the consideration that every culture, which logically implies every social system (even dyads or individuals as their constituent parts), is unique.

Perspectivism leads to not only meta-theoretical considerations of power, knowledge, and diversity of perspective, but also methodological ones[1]. For example, neighborhoods are not static and do change over time. Heller (2014) has indicated that the various impediments that communities confront, such as inadequate resources or insufficient technical knowledge, may require different strategies. Tebes (2012) has argued for a pragmatic point of view: that evidence for "trueness" may be best obtained from a diverse set of mixed methods, one that includes the voices of multiple perspectives and forms of data. The challenge for this research is to consolidate, aggregate, and make sense of the multiple strands of evidence or data, and it may best be achieved at some meta-level of analysis. In a sense, we may be able to recognize different perspectives on "reality", and yet still distill common elements, or predictable relationships among seemingly disparate elements. While this view acknowledges that often multiple and competing definitions of

human phenomena (along with inherent issues of power and privilege) are at play, it also proposes that at times it is possible to describe common elements that hold true across diverse contexts. It is with the intention of instigating a cohesive distillation of these common elements within the field of Community Psychology that we offer the following discussion related to the major theories in the field.

Central Theories

The question of which theories are central to the field of Community Psychology continues to be a subject of debate. The authors of this article recently posted the following notice on the Society for Community Research and Action's listserv: "A group of us at DePaul University are thinking about which theories are central to the field of Community Psychology. We would be interested in learning whether you use theories explicitly, and if you do use theories explicitly, what theories you use, and do you borrow them from other disciplines or are they from the field of Community Psychology." The following 32 theories were mentioned:

1. Kelly's (2006) Ecological Theory;
2. Rappaport's (1981) Empowerment Theory;
3. Sarason's (1974) Psychological Sense of Community Theory;
4. Bronfennbrenner's (1979) Ecological Systems Theory;
5. Hawkins and Catalano's (1992) Social Development model;
6. Dohrenwend and Dohrenwend's (1981) Stress & Coping model;
7. Ryan's (1976) Blaming the Victim;
8. Martin-Baro's (1994) Liberation Psychology Theory;
9. Rogers's (1959) Helping Relationships (empathy, acceptance/warmth, and genuineness);
10. Irving Yalom's (2005) Conception of Therapeutic Factors in Group Therapy (instillation of hope, universality, etc.);
11. Habermas's (1984, 1987) Theory of Communicative Action;
12. Marcuse's (1969) Critical Social Theory;
13. O'Donnell, Tharp, & Wilson's (1993) Activity Theory;
14. Flay and Schure's (2012) Integrative Theory;
15. Rawls's (1971) Social Justice Theory;
16. Sen's (2009) Social Justice Theory;
17. Foucault's (1991) Conception of Power;
18. Bordieus's (1986) Theory of Forms of Capital;
19. Foster-Fishman, Nowell, and Wang's (2007) System-Theoretical Work;
20. Fishbein and Ajzen's (1975) Theory of Reasoned Action;
21. Ajzen's (1991) Theory of Planned Behavior;
22. Rutter's (1985) Resilience Theory;
23. Weiss and Cropanzano's (1996) Affective Events Theory;
24. Barker's (1968) Behavior Setting Theory;
25. French, Rogers, and Cobb's (1974) Person-Environment Fit Theory of Stress;
26. Biglan and Sloane Wilson's (2015) Behavioral Systems Science;
27. Nowell and Boyd's (2010) Sense of Community Responsibility Concept and Theory;
28. Von Bertallanfy's (1969) Open Systems Theory;
29. Moos's (1986) Social Context Perspective;
30. Argyris's (1993) Organizational Learning Theory;
31. Srivastval and Cooperrider's (1986) Appreciative Inquiry Theory;
32. Spreitzer et al.'s (2005) Socially Embedded Model of Thriving.

We were somewhat surprised by both the variety of theories being used as well as the fact there was little agreement for leading or central theories. Because Community Psychology is concerned with many personal and social issues, perhaps the variety above is

more of a reflection of this breadth of concern than a symptom of theoretical fragmentation or lack of consensus. If one were to trace the origins of these theories, for example, it is possible that many have similar roots, or address different levels of abstraction (e.g., individuals vs. social institutions). In other words, it is probably not as though this field has 32 different explanations for essentially the same phenomena. Among the responses, a few suggested that the field would benefit from more rigorously defined theories, framing rigor in terms of clarity of application, clarity of exposition, and lack of ambiguity in predictions. This article is a response to that challenge, attempting to analyze how successfully we have met this standard of rigor. We do not have the space in this article to review each of the above theories, so will we will focus our evaluation on several of the more prominent theories in the development of the field of Community Psychology, focusing on their testability and predictability.

Theories in Community Psychology

In this article, we are attempting to assess theories in terms of what they currently do and what they are intending to do. While we do acknowledge that there are many in the field who would argue that employing theories heuristically *is* useful and that the "usefulness" of a theory often depends on what you are actually trying to do with it, we will suggest that the following theories could be more useful if progress was made in their ability to predict and describe phenomena more explicitly. Therefore, below we review some of the key attributes of three prominent Community Psychology theories, and we explore whether these they describe, explain, and predict phenomena.

Ecological Theory

Overview of Ecological Theory

Kelly's (1968) *Ecological Theory* focuses on how people become effective and adaptive in different social environments. Kelly proposed four ecological principles that serve as a theory for examining settings and behavior: interdependence, cycling of resources, adaptation, and succession. Interdependence implies that change in one component of an ecosystem can change relationships among other components of the system. The principle of cycling of resources provides a guide for understanding how ecosystems create and use new resources. This allows us to determine how resources can be used more effectively in a setting and how additional resources can be generated. Adaptation is defined by the way environments restrict, constrain, and shape peoples' behavior, and how, in turn, the environments begin to also change due to the individuals within them. This concept implies that behavior that is adaptive in one setting may not be adaptive in others. It also points us toward trying to assess who participates in defining adaptive roles and in generating normative acceptance and support for a wide range of adaptive behaviors. Finally, the principle of succession suggests communities are in a constant process of change, and over time, the demand for adaptive capacities changes.

This theory has been used by community psychologists to understand behavior in interaction with social and cultural contexts. Psychologists in other fields have independently explored a number of these domains. For example, social psychological theories often address issues of context [e.g., Latané's (1981) Social Impact Theory]. However, in Latané's social psychological theory, the real-world interdependence or dynamics that are integral features of Kelly's theory are not present. For Kelly, adaptation and succession are biological, dynamic processes that characterize social settings and human interactions.

One example of community research using Kelly's theory is the work of Quattrochi-Tubin

and Jason (1980), evaluating the success of a stimulus control procedure in increasing interactions among elderly participants in a lounge area of a nursing home. The intervention involved providing the residents coffee and cookies to see whether these resources would change their behaviors. Several residents mentioned that they would hold a half-filled cup, even though they were not interested in drinking it, just to be part of the group. In addition to increasing interactions, the intervention effectively eliminated television watching, thus showing response generalization. The intervention also demonstrated interdependence--changes that occurred in one aspect of the setting influenced other aspects. For example, several group members began serving coffee to those who were physically unable to serve themselves. One woman even approached the nursing station to inform the aides of what a good time she was having serving the men. It appears that the refreshments represented an environmental support facilitating social activities and altruistic behaviors. For Kelly, the ecological notion of interdependence helps highlight dynamic processes that often occur in our social and community interventions, as in the example of how small changes to the setting enabled several participants in the nursing home to become part of the group.

Evaluation of Ecological Theory

Aspects of Kelly's *Ecological Theory* have been evaluated using several diverse approaches. Kingry-Westergaard and Kelly (1990) have suggested that multiple approaches are needed to understand complex qualities of relationships and systems. One key method for getting at these complex qualities involves the collaborative relationship between the researcher and the participants. This means that concepts and hypotheses are developed, tested, and evaluated by both the researcher and the participants. Additionally, Wandersman, Chavis, and Stuckly (1983) suggest that the characteristics of the individual citizens themselves (e.g., motivation to participate, available resources, level of training, and organizational characteristics) influence the level of citizen involvement. Citizen participation in community interventions has potential for sensitizing, prioritizing, and sustaining research efforts. If the research lends itself to citizen involvement, then determining the best level and type of involvement is critical.

According to Kelly (2006), people interact with their environment through the four specific principles described above. These ecological principles focus on different aspects of the social context and behavior, and they also overlap and complement one another. In a classic study examining youth who transitioned into a new school, Kelly (1979) found that boys with high preference for exploratory behaviors had more positive scores on adaptation measures in both of two schools, but that the "fluid" school where more students entered and left in a year, predictably facilitated more exploratory behavior. The findings of the study strengthened his view of Ecological Theory by showing that person-environment interactions were important, that adaption and change were ever present, and rates varied by individual differences and setting.

On the other hand, because Kelly's theory provides for a large number of hypotheses or models, it is somewhat non-specific, and thus consistent with potentially quite a few rather different models. Parsimony considerations might suggest simpler and more direct theories of person-setting interactions than this broad generalized construct of social ecology. It raises the following question: If this theory can generate a variety of quite disparate hypotheses, in what sense can any investigation inform the validity of the theory itself?

For these reasons, we propose that Kelly's (1968) Ecological Theory is more usefully conceptualized as a framework than as a theory. Though, it is perhaps more specific than Bronfennbrenner's (1979) framework

with respect to relationships between constituent elements and its ability to generate hypotheses. For example, Kelly (2006) has argued for the power of social support, stating that "organizational resources were essential for my well-being" (p. 11). Indeed, the role of support as causal and critical for good functioning is a specific prediction made from Kelly's work. Frameworks are certainly useful tools, especially if they can be used to develop several interrelated models. A model is a set of hypotheses about a real-life situation (See *Figure 1*); and Kelly's "theory" (or framework) could be productively developed into one or more testable models, each containing many hypotheses (Jason, 1992). For example, one could test the hypothesis that actively participating in more community events leads to higher ratings of social support. In turn, greater social support (i.e., interdependence) could relate to greater well-being. Assuming that social support and well-being can be observed in a suitably designed study, then, these two hypotheses create a testable model based on Kelly's theory.

The primary role of theory in empirical inquiry is to suggest important research questions by hypothesizing mechanisms and making predictions. It is possible many community psychologists have used Kelly's Ecological Theory to explain what they have stumbled upon (i.e., Reichenbach's (1938) context of discovery). With this ideology, there may be a preference to explain after-the-fact phenomena, and the danger here is that the investigator who has stumbled upon a concept in practice might overstate it as a theory. Far too often, the theory is no more than an afterthought, as mentioned above, used to explain what the findings are rather than predicting what they should be a priori. Therefore, we propose here that Kelly's ecological concepts are better characterized and used as a framework which can be employed as a guide to develop testable models.

Psychological Sense of Community Theory

Overview of Psychological Sense of Community Theory

Another influential community psychology theorist was Sarason (1974), whose insight was that a *Psychological Sense of Community* was a feeling that emerged as a function of the interaction of the individual and the context. He described this theory as follows: "the perception of similarity to others, an acknowledged interdependence with others, a willingness to maintain this interdependence by giving to or doing for others what one expects from them, the feeling one is part of a larger dependable and stable structure" (p.157). This definition incorporates many key aspects of Community Psychology, such as the notion that an individual exists within a larger network and structure and that these individuals are interdependent. In particular, sense of community theory claims that if people feel that they exist within a larger interdependent network, they are more willing to commit to and even make personal sacrifices for that group. When this theory was initially proposed, there was considerable enthusiasm for the idea and it was soon considered one of the foundational constructs of the developing field of Community Psychology.

While similar constructs have been proposed in other disciplines, none is a perfect match for sense of community. Sense of community is feelings-based rather than based on a rational evaluation of the fulfillment of a person's needs or aspirations. Sense of community is more than the "cohesion" that is typically measured in industrial/organizational settings (e.g., Kozlowski & Ilgen, 2006), as cohesion is often market based, and it does not need emotional connection to accomplish tasks. Sense of community is also more than the positive group feelings, such as "morale," that are typically studied by positive psychologists (Peterson, Park, & Sweeney, 2008). In addition, esprit de corps measured by

military psychologists (e.g., Manning, 1991) focuses more on positive affect in military activities.

In theory, the construct sense of community ambitiously attempts to describe both individual-level feelings of connectedness and the implications these feelings have on behaviors and settings as well as the reciprocal ways in which different settings can facilitate feelings of connectedness and related behaviors. But sense of community is an aggregate construct and not an individual measure, and the essential feature is how the members of the larger group or entity affect the individual feelings of community. Like a flock of geese that flies as a unified entity, the collective assessment is critical. In essence, rather than assessing sense of community by one person's observation, it is essential for there to be a representative sample of individuals to tap this construct. One could measure "one" person's sense of belonging to a group, but this single observation would not capture the group's sense of community.

In practice, attempts to operationalize these concepts over the years have been met with various theoretical and methodological challenges. For example, sense of community has been variously conceptualized from place-based (locational) communities (i.e., neighborhoods) to more generalized and abstract communities (relational communities) (Bess, Fisher, Sonn, & Bishop, 2002; Bishop, Chertok, & Jason, 1997), thus making the scope of measurement more difficult and less generalizable. This variety can introduce a level of imprecision if these differential applications of the concept are not explicitly outlined and investigated. Furthermore, because the concept of sense of community attempts to capture interactions between different levels of influence (e.g., individual feelings, relational behaviors, and setting features), designing measures that capture this multidimensionality has also been difficult (Jason, Stevens, Ram, 2015). In one attempt to further specify this complexity, Brodsky, Loomis, and Marx (2002) have recommend that researchers begin to conceptualize and measure multiple senses of community. That is, the multiple possible nested settings that may each pose interrelated, but often different, senses of community. They postulated that the senses of community experienced in multiple settings likely interact with each other and that understanding a more complete constellation of sense of community would help to better understand sense of community in any one particular setting. For example, "when a researcher predetermines the PSOC [psychological sense of community] target community, it is unclear if that community has the same salience and/or importance to all research participants. Thus the aggregate community measure may be more meaningful as an indicator of individuals' commitment to the community, but be less useful as an indicator of individual outcome" (Brodsky et al., 2002, p. 332).

Despite these challenges, community researchers have theorized and tested a number of scales aimed at operationalizing "sense of community." Perhaps, most notably, McMillan and Chavis (1986) proposed this construct to have four dimensions: membership, fulfillment of needs, shared emotional connection, and influence. Moreover Peterson, Speer, and McMillan (2008) developed the *Brief Sense of Community Scale,* an 8-item scale to measure these factors. In addition, Bishop, Chertok, and Jason (1997) proposed an operationalization of sense of community using the constructs of mission, connections, and reciprocal responsibility. The corresponding measurement scale, the Perceived Sense of Community Scale, was intended to be less tied to geographic location (i.e., neighborhood) than previous scales.

Most recently, Jason, Stevens and Ram (2015) have suggested that sense of community offers a unique information when examining an individual's experience as part of a system. They conceptualized this experience as a result of an individual being part of three

ecological levels. The largest level is *Entity*, the unit upon which the community is formulated (e.g., neighborhood, school, or organization). In order to tap into this domain, they incorporated items that refer to characteristics of the group, such as common goals, purpose, and objectives. The next level,, *Membership* refers to the relationships between the members of the group (e.g., neighbors on a block, students within a school). Finally, at the third and narrowest level, or "the individual," is *Self*, which assesses the meaningfulness, commitment, and emotional connection experienced by members. Improving on prior attempts to capture sense of community, this representation of the construct has the advantage of providing a detailed perspective on the interactive relationship between an individual's own experience within a group and characteristics of that group, attempting to capture how these aspects relate to his or her well-being. In a sense, this definition captures Sarason's quote referred to above, defining psychological sense of community as comprising multiple levels--a stable structure (Entity), interdependence with others (Members), and a willingness to maintain interdependence (Self).

Evaluation of Psychological Sense of Community Theory

Capturing the essence of sense of community in valid, reliable, and generalizable terms has been challenging for community psychologists (e.g., Nowell & Boyd, 2010). While hundreds of research studies have utilized sense of community as a construct, people continue to develop sense of community instruments because of a dissatisfaction with current instruments. In other words, measurement issues include conceptual complexity, such as the empirical overlap between the 3 or 4 identified factors. Brodsky et al.'s (2002) observation that sense of community operates at multiple levels explains why many measurement efforts have encountered conceptual problems when attempting to capture a group concept using individual level assessments. For example, McMillan and Chavis' (1986) 4-factor structure has not generally been confirmed by factor analytic studies (Chipuer & Pretty, 1999; Stevens, Jason, & Ferrari, 2011). When it has been confirmed, such as in Peterson, Speer, and McMillan's (2008) *Brief Sense of Community Scale,* the correlation of factors is so high that its use at the individual factor level is problematic. Others have tried to reformulate the McMillan and Chavis model, such as when Long and Perkins (2003) retained three factors consisting of social connections, mutual concerns, and community values. The latent measurement model, however, did not translate into acceptable reliabilities at the subscale level. Scales measuring other formations of sense of community, such as the *Perceived Sense of Community Scale* (Bishop, Chertok, & Jason, 1997), while perhaps having more reliability, also have proved to be problematic in various ways (Stevens, Jason et al., 2012), as factor analyses revealed that negatively worded items loaded together.

However, there has been recent progress on an instrument that is designed to capture the ecological structure of sense of community at three layers (Jason, Stevens & Ram, 2015). Using these three levels, the *Self*, the interactions with others (*Membership*), and the organization (*Entity*), a brief 9-item questionnaire has been developed with good psychometric properties to assess sense of community. The preliminary evidence suggests that each domain is a necessary but not sufficient component of sense of community. For example, a person might experience a strong sense of *Entity*, but not of *Membership* or *Self*, and in such a situation, he or she may not have a strong sense of community. Jason, Stevens and Ram (2015) have found empirical support for such a conceptualization of sense of community with good measurement model fit and internal reliabilities, and the findings have now been replicated with a community sample and used to predict two recovery home phenomena of

house operations and member trust (Jason, Stevens, & Light, in press).

Understanding the boundary conditions or limits of the sense of community concept is also of critical importance. Further progress is needed in outlining the contexts in which this concept applies, such as whether different cultural communities may tend to variously weight different settings as more or less important in terms of sense of community (i.e., present different constellations of multiple sense of community) and what kinds of implications that has for the generalizable application of related measures. For example, gangs or violent extremist groups might have similar sense of community scores to those engaged in more positive activities such as team sports. In addition, sense of community is a state so it changes dynamically over time. It is also possible that different levels of sense of community might not be predictive of large behavioral differences (Davidson & Cotter, 1993). Even if this is the case, however, the concept may still be predictive of important unusual behavior in specific contexts. As an example, during one summer in Chicago when there was an extreme heat wave, sense of community may have been what motivated neighbors to check on single elderly people, saving many lives. However, from a theoretical point of view, having a more narrow and focused description increases the likelihood that one can directly test the theory, and that this can improve the creation of the measurement and the test. If addressed in future research efforts, better understanding the boundary conditions and magnitude of effect of the sense of community concept could aid in its use within the field as a predictive and explanatory concept. This would, of course, improve its standing as a clearly defined and rigorous scientific theory capable of capturing individual-context interactions in usefully replicable terms.

In the prior section, we concluded that Kelly's theory might best be described as a framework. It is possible that, given the consistent past attempts at and the recent progress in operationalizing the construct, the sense of community concept may, in fact, meet the criteria for theory as defined in this article. However, we propose that by continuing to pursue valid and reliable measures of the construct and by better defining its boundary conditions, sense of community can be wielded more effectively and more rigorously as a theory in terms of satisfying minimum standards of prediction and control.

Empowerment

Overview of Empowerment Theory

From the very beginning, Rappaport (1987) stated that a theory of empowerment should be able to outline the limits of the construct and describe the range of situations in which it is generalizable. Furthermore, Rappaport (1987) indicated,

> Community Psychology as a field of study has reached a time in its development when theory must be proposed, tested, and modified. Without theory, a field cannot long survive as a scientific enterprise. Without theory the applications of a field must become increasingly cut off from the sharp edge of scientific critique. (p. 122)

Here we evaluate how well Rappaport's theory as it is used today has integrated these ideals.

In 1981, Rappaport wrote an influential article on *Empowerment Theory* titled: "In praise of paradox: A social policy of empowerment over prevention." Rappaport (1981) proposed a theory of empowerment that outlined 4 characteristics: 1) Individuals can be viewed as complete entities having both needs and rights; 2) attention must be paid to paradox; 3) there are both divergent and dialectical solutions to social problems; and 4) there is a symbolic sense of urgency in understanding and solving social problems. In other words, people should not be viewed

unidimensionally. In addition, as there are myriad solutions and opportunities for solving community problems, it is not optimal to implement single-barreled solutions to most social issues.

Believing "theory is essential to the maturation of any field of serious scientific study," Rappaport (1987) later made a case for empowerment, and defined it in the following way:

> I have suggested that empowerment is a process, a mechanism by which people, organizations, and communities gain mastery over their affairs. Consequently, empowerment will look different in its manifest content for different people, organizations, and settings… I suggested that a concern with empowerment leads us to look for solutions to problems in living in a diversity of local settings, rather than in the centralized single solutions of a monolithic "helping" structure, where help is considered to be a scarce commodity… (pp.122).

In his 1987 article, Rappaport expanded upon his earlier notions by providing an outline of "11 assumptions, presuppositions, and hypotheses built into a theory of empowerment" (Rappaport, 1987, p. 139). These included: empowerment is a multi-level construct; the radiating impact of one level of analysis on the others is assumed to be important; the historical context has an important influence on the outcomes of a program; the cultural context matters; longitudinal research is desirable and perhaps necessary; empowerment is further a world view theory (e.g., participants are considered collaborators, and the choice of language is important); the conditions of participation in a setting predicts empowerment; an organization with an empowerment ideology will be better at finding and developing resources than one with a helper-helpee orientation; locally developed solutions are more empowering than general solutions; sizes of settings matter; and, once adopted, empowerment expands resources. According to Rappaport, these assumptions suggest that the goal or dependent variable of our community interventions should involve empowerment.

Evaluation of Empowerment Theory

We will first consider how well empowerment describes a phenomenon of interest, as well as the important question of whether a definition of empowerment is generally agreed upon. An initial question is how Rappaport's definition is different from agency, autonomy, volition, perceived control, and the self-efficacy of some action. Rappaport (1987) does clearly put a great emphasis on the interaction of the individual and environment, yet does not clearly specify how to measure this construct. As a result, empowerment could be viewed as the ability to influence and organize people (Christens, Peterson, & Speer, 2011), or as a process, as a psychological state, or as the act of giving someone power or being given power, or even all of these arguably distinct phenomena. If the fundamental description is variable and subject to different interpretations, this poses challenges not only in terms of measurement but also in terms of prediction and control description, which are the minimal standards of a theory.

Furthermore, by spanning ecological levels, there might be additional problems with the consistency of meaning. For example, an empowered organization might be very different than an empowered individual. One company might be empowered, in that it is very efficient and has a growing market share and power, and yet the experience of empowerment may be very different for an individual within that organization. That individual might feel unempowered if forced to meet unrealistic efficiency expectations, all in an effort for the overall organization to be perceived as empowered (particularly among the management). In other words, the core

definition of empowerment may be different at the organizational and individual level, and if general mastery and control over one's future is the core construct, then this might be manifested very differently at different organizational levels. This is supported by Zimmerman (1995) who asserted that "empowerment may be an open-ended construct that is not easily reduced to a universal set of operational rules and definitions…the measures we develop for one study may not be appropriate for another" (pp. 583). It could even be argued that empowerment really only makes sense for individuals, as it is ultimately a perception of efficacy, and organizations don't have perceptions. Therefore, if a construct's definition is ambiguous, operationalizations of it are likely to be as well.

Although the foundation work for empowerment occurred over 30 years ago, there remains a need for a clear and consistent definition. For example, Cattaneo and Goodman (2015) used empowerment as the basis for understanding domestic violence practice, but also concluded there is a need for a consensus on the precise definition. Hunter, Jason, and Keys (2013) focused on measuring empowerment within a specific population in a specific context, and found that the construct is so general as to impede accurate measurement. Because it has been measured differently by different investigators, each with their own purposes, the criteria lack consistency, hindering its use as a theory for the field. If numerous researchers each have their own interpretations of the theory and develop their own measures, then accumulation of evidence for (or against) the theory is not possible. Being stuck at a descriptive phase without a consensus definition thus limits the scope and impact of the theoretical construct because new evidence cannot easily be interpreted as supporting or refuting the theory.

Furthermore, the empowerment concept does not give specific directions or predictions regarding mechanisms. There is no systematic way of predicting or evaluating differences and likelihoods of outcomes (e.g., Borsboom, 2013). Therefore, from a theoretical point of view, Rappaport has neither described the basic mechanisms at work, nor made predictions about how the context might alter this. Although, more recently, researchers (e.g., Christens, Peterson, & Speer, 2011) have attempted to make specific predictions regarding Empowerment Theory, there may be some debate about whether their predictive tests flow directly from that theory. This might also apply to Peterson's (2014) work on organizational empowerment (Peterson & Zimmerman, 2004) and measurement frameworks for empowerment at multiple levels of analysis (Peterson, 2014). The theoretical foundation of empowerment would be sturdier and ultimately testable if empowerment theorists came up with a prediction regarding how empowerment might work in a given situation rather than saying there is no single way of empowering entities. This would allow for new hypotheses and new predictions. In summary, because the empowerment concept lacks a consensus definition/consistent formulation and does not at present have predictive capabilities, it does not meet the qualifications of theory as outlined here and might better be referred to as a framework.

Discussion

When using theories in the way outlined in this article, different tasks need to occur at different stages of the theory development process, and the objective or goal of the research generally shapes the nature of the investigation. In the exploratory stage of scientific research and theory development, qualitative and mixed methods are often used in order to obtain rich descriptions of the phenomenon of interest. At the exploratory stage, it is critical to develop measures that correlate with each other, and this can be done with cross-sectional designs; hopefully these measures vary enough to be able to

capture change over time. It is not essential to make a causal argument at this point, but an investigator may make predictions from these data. During the next step of theory building and testing, the investigator may begin to make specific predictions. This may be done through longitudinal data, in order to determine a temporal sequence of cause and effect or through experimental data, to determine situational cause and effect. The theory is then put into practice, and its generalizability is evaluated. This process is iterative, and over time, boundary conditions emerge as certain propositions are found to be limited to specific people, settings and times.

Community Psychology has often been characterized by exploratory research, which has an important role in describing a phenomenon and getting a conceptual handle on potentially important causal mechanisms. However, further development is required for making predictions regarding the phenomena of interest. The goal of exploratory research is to learn about a phenomenon without necessarily imposing a structure on it. Information from this exploratory stage later informs a preliminary structure for this phenomenon, making it possible to come up with a model that describes how people do things in a particular way. This stage of exploratory research is akin to Reichenbach's (1938) context of discovery where the justification or falsification of theories is not yet central. It is not until one engages in the context of justification that a theory begins to form. In order to develop a good theory, at a starting point, one must also be concerned with the development of agreed upon and psychometrically sound measures and the utilization of rigorous methods to test employ those measure. This stage of theory development has occurred less often in the field of Community Psychology.

There have been many challenges to the development and testing of theories for the field, and the concepts reviewed above all encountered significant obstacles to developing a consensus definition and measurement framework. In addition, it is possible that many theories within the field of Community Psychology are better characterized as frameworks, which do not specify relationships that can be used for explanation. There needs to be more discussion about whether frameworks are useful and how community psychologists can progress from frameworks to more rigorous theory. Finally, the somewhat ideological nature of Community Psychology (putting great value on participatory research, attempting direct action to improve people's lives, etc.) can result in less willingness to consider theory in the terms described here.

Community Psychology is probably one of the more complex fields in the social sciences because it embraces multiple levels of influence rather than simple individual differences. This complexity has been a challenge for theory development and testing. Community psychologists generate, accumulate, consolidate, and leverage knowledge based on evidence with the goal of improving peoples' lives, especially those who suffer most from system-level forces. If some community psychologists feel that knowledge is unique and not generalizable, then these investigators' function may be relegated to simply one of reporting. We as authors propose that significant progress toward this goal of helping to improve lives could occur with the more rigorous development and testing of theories. Furthermore, we propose that experimental designs are the most effective tool in this process of theory testing (e.g., triple blind, randomized assignment, unbiased, longitudinal designs). Weaker forms of theory testing (e.g. quasi-experimental—non-random assignment with controls) lack strong evidentiary power. Even weaker designs (e.g., observational/cross-sectional) are more properly thought of as generally exploratory and if modeled a priori, at best weak evidence for confirming/disconfirming a hypothesis. If modeled ex-post, these

designs are really descriptive exercises speculating a path for future investigation.

The incorporation of context in a theoretically meaningful way is another necessary ingredient for a fully mature field of Community Psychology. We are not always even aware of the potent effects of an individual's context, and there is evidence that the environment can have profound effects on things that have been considered genetically derived. For example, Ravelli et al. (1998) investigated prenatal exposure to famine when during the latter part of World War II, the Germans severely reduced food supply to the Netherlands. Prenatal exposure to famine, especially during late gestation, was linked to decreased glucose tolerance when the infants became adults. They concluded that poor nutrition in utero can lead to permanent changes in insulin-glucose metabolism, and the environmental effect of famine on glucose tolerance was especially important in people who later became obese.

The importance of context is often not recognized or integrated in community psychology studies, as data is frequently obtained at the level of individuals. This suggests that the field is still at an embryonic stage of development. However, emerging work using theory related to dynamic systems does present an opportunity to systematically investigate settings. Before Community Psychology really began to form cohesive ideas around contextual impacts, sociologists were attempting to develop theories and methods that capture social contexts. Their Sociology-of-Knowledge theories are illustrative and have been used to understand people's perceptions of reality, social change, and the role of social institutions (Berger, 1977; Merton, 1968; Strauss, 1997). Borrowing from these theories might help us capture a systems point of view. For example, whole network theoretical approaches can provide a relational map of some social ecosystems in cases where system-wide dyadic relationships may be exhaustively measured. Dynamic theories of whole social networks focus on the mutual interdependence between relationships and behavior change over time, providing a way to conceptualize and empirically describe two-way transactional dynamics (Jason, Light, & Callahan, 2016).

Yet, in defining and operationalizing constructs, we often find some of the most serious challenges to the field of Community Psychology, as illustrated with our discussion of empowerment. Such issues occur in other fields as well, as criterion variance (i.e., differences in the formal inclusion and exclusion criteria used classify data into categories) accounts for the largest source of diagnostic unreliability (Jason, & Choi, 2008). Criterion variance is most likely to occur when operationally explicit criteria do not exist for categories (Spitzer, Endicott, & Robins, 1978), or when there are varying criteria for a phenomenon to be defined. When categories lack reliability, the upper boundary on the validity (i.e., usefulness) of a category is inherently limited. Therefore, criterion variance occurs because operationally explicit criteria have not existed or there has not been a consensus among investigators for the criteria. For theory development, there is a fundamental need for the provision of operationally explicit criteria and reliable instruments to measure the phenomena.

This is evident in Heller's (2014) argument about communities; there is often a lack of a clear theoretical statement about how communities should be conceptualized. Part of the problem stems from the highly variable definition of "neighborhoods," which can range from a block in a residential community to an on-line network. In addition, there are a number of mediators of neighborhood effects, including the quality of resources (e.g., libraries, schools, parks), level of community integration (e.g., members how know each other), and the quality of social ties and interactions. These debates about meaning and definition are underpinned by

important differences in perspective, and it may not always be possible to merge or align these differences. How communities and related constructs "should" be defined is a deeply cultural question, with many different answers. In specifying a universally applied definition for these phenomena, researchers run the risk of privileging one group's definition over others. It then becomes an issue of who has the power to define these constructs. One of the strengths of community psychology is that we do ask those questions of science (i.e., who's definition are you using? Is this application of a "generalized" definition oppressive in that it privileges the ideas of the dominant group?). This may be some of the legitimate reasoning behind a reluctance to define some theories in the ways we have outlined. We recognize that these are important issues to consider and offer the above observations as one perspective that we hope will spur further thoughtful discussion around how we can engage in theoretical rigor while acknowledging the potential implications this has in terms of pitfalls related to power and privilege.

The methodology that is used may naturally flow from theory, but this is only possible in the context of clearly articulated theory; it is necessary to succinctly articulate the measurement of a construct before a theory can be advanced, refined, or argued against. In the field of personality psychology, we have seen the evolution of the measurement of the "Big Five" over the 20th century and the appeal of this model has been largely due to development of measures; currently, there are full theories (e.g., Whole Trait Theory, Fleeson & Jayawickreme, 2015) that are emerging that would not have been possible without the measurement work of the 20th century. The lack of such development is a primary criticism of the empowerment literature, in that the measurement of the constructs are still ill-defined and under-developed.

There are several limitations in this article. For example, whereas others' efforts identify issues related to a philosophy of science and related definitions of theory were empirical and conceptual (Faust & Meehl, 1992), our efforts within this article were to identity theories within the field of Community Psychology as well as to examine how well they allow us to more fully understand individual behavior by taking into account the context within which the person lives. In addition, in this article, we have not been able to examine all the relevant theories within the field of Community Psychology.

Conclusions

The field of Community Psychology focuses on interesting questions and tries to understand them, with the implicit hope that as these relatively specific topics become better understood, that they will start to coalesce into larger structures. It is likely that many topics in Community Psychology will never coalesce around one theory, because they are, indeed, complex systems comprising multiple mechanisms of change. For instance, medicine as a clinical practice is based around biology, genetics, behavioral science, organizational theory, etc. When engineers design airplanes, they use results from fluid dynamics, electronics, computer systems, materials science, human psychology, etc. It might be a good idea to be open to this possibility in Community Psychology-- that at its heart it is an area of study that brings together a variety of factors (and theories) affecting human behavior.

A starting point for theory development in Community Psychology may still need to be at the descriptive level, where specification is about a particular population in a particular context, employing validated measures for the phenomena of interest. The field of Community Psychology will benefit from investigators using similar measures to assess particular theories, as well as the development of simpler and more direct theories of person-setting similarities. This

consistency and parsimony will help the field develop and test theories allowing for prediction and explanation.

There has been a reluctance to attempt the development of more rigorous and predictive theory, in part because it is not seen as a major goal, compared to taking action. However, there is no obvious reason why sound theory cannot be developed that accomplishes the empowerment and participatory goals of Community Psychology, but does so in a way that is scientifically rigorous. This, however, would require Community Psychology to evolve in a different direction, one in which the entire collaborative enterprise between community psychologists and communities is considered to be the object of study, with the success, or lack thereof, of an intended change as the ultimate outcome of interest.

For example, we do believe that there is considerable potential for exploring the influence of contextual factors on human phenomena that incorporate how third-order change occurs and how it impacts communities. Third-order change is an essential shift in the social fabric, whereby a community changes customary assumptions, worldviews, cause and effect relationships, and practices (Bartunek & Moch, 1987). Communities in which third-order change occurs have developed a culture of continual questioning, constantly identifying problems and social precipitants to problems, implementing solutions, and engaging in ongoing process and outcome evaluations for these solutions. Third-order interventions also have the potential to create unexpected positive changes, as settings develop new ways of viewing problems and functions (Robinson, Brown, Beasley, & Jason, 2015). While such change may be aided by or facilitate empowerment, third-order change is distinct in that it emphasizes a fundamental ongoing monitoring and change rather than emphasizing autonomy and self-direction. There is a need for theories to capture these types of phenomena, and a systems theory perspective that includes all these elements may be a promising approach. In addition, the goal for Community Psychology theories should ideally specify what *specific* aspects of context influence what *specific* aspects of individuals. Furthermore, possible *specific* mechanisms by which this occurs should be articulated to serve an explanatory function to guide the development of meaning and evidentiary arguments for causality.

Notes

[1]Two features of some recent literature in philosophy of science is especially relevant. First, the possibility of reliable testing of scientific theories (of whatever level of generality) depends on the availability of a suitable vocabulary of *natural kinds*: a vocabulary for describing the kinds, relations, magnitudes, etc. that are causally important factors in the relevant phenomena. This means that theoretical and empirical work in sorting out orienting frameworks is in fact absolutely central to scientific methods in general, not just in community psychology. Moreover, the relevant causal factors may often turn out to interact with one another in complicated ways, thereby causing difficulty for researchers, theorists, and scientists in general (see Boyd 2010; Oyama 2000; Wilson et al 2009). The issues community psychologists face may be typical in the sciences in general, in other words they are not peculiar to community psychology. Second, the pluralism of competing approaches that seems to describe the scientific status of community psychology is also commonplace in science. In fact, it is almost certainly essential in most cases in which scientists sort out conceptual and methodological issues (see Chang, 2004, 2012).

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