Cacophony is Music to our Minds

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The clarity of a single note played beautifully can be a highlight of a musical performance. Jason, Stevens, Ram, Beasley and Gleason (2016) do us a service by reminding us of the distilled clarity that arises from a pure note played well in community psychology. In science this can includes theory-based predictions that are tested and affirmed, or tested and either discarded or improved. Such clear moments can be uncommon and are special instances of scientific progress. Seeking such clarity of theory is important in advancing science.

On the other hand, in my first year of college, an insightful music major commented that the history of progress in music appreciation is the story of listeners learning to appreciate new forms of dissonance. Science is music to the ears and minds of researchers and is about many things. Developing theory-based predictions that enable us to predict and control is an important one, but only one of many, as Jason and his colleagues (2016) note. Among others, science also aims to describe the previously undescribed, create and convey meaning, measure, heighten understanding, ascertain effectiveness and impact, and generate new ideas and directions for thought, research and action. Community psychology in its growing yet brief history has been less about playing pure notes beautifully and more about creating dissonance and working to value the cacophony (Beehler & Trickett, in press). Our progress in science has been more about adding voices and perspectives and less about focusing or limiting them (cf. Gone, Hartmann, & Sprague, in press; Miller & Keys, 2001). Jason and colleagues (2016) are accurate in their view of community psychology's mindset often being regarded as less simple and more complex than theory, which provides clearly testable predictions. Although they mention various functions of theory, they focus more traditionally on the value of precise prediction and control. With this classic focus they thoughtfully describe several popular theories in community psychology. They suggest a number of ways to enhance the rigor of community theory and research and in so doing make a valuable

contribution. They make their point well, but could improve upon it if they did not cite sources construing scientific progress so narrowly. For example, I would question the divisive and limiting assertion that theoretical work that does not readily produce falsifiable predictions is a less acceptable form of science. For this brief comment I focus primarily on generativity as a one of several valuable functions of scientific theory that is given little attention by some of the sources Jason and colleagues cite in defense of their position.

Traditional positivist and post-positivist approach privilege, prediction, and control as properties of scientific theory. To pursue these goals, researchers have tended to exert uncommon control by using laboratory settings, limiting the number of variables considered, and arranging or scripting human interaction (Argyris, 1968). Fidelity across subjects and trials is emphasized, not adaptation to varying life stories and local contexts. Furthermore, the voice of the researcher is dominant and emphasized over opinions of community members. Consistent with this approach, Jason et al (2016) make common cause with those who emphasize elegance in simplicity as the goal for theory. Complexity is seen as leading to indeterminate outcomes and is therefore valued less. In many studies the characteristics and goals that foster testable theories restrict what is examined and focus the researchers' attention away from context. If this pursuit of clarity occurs in the service of seeking a false simplicity, it may lead us into theorizing about situations in which the

opportunity to create knowledge is constrained rather than enhanced.

In developing his view of social constructionism, Gergen (1978) argues that the best test of a good theory is not prediction and control – does it predict the outcome accurately – but rather its generativity, or what new fields of inquiry and action are opened by a theory. In a noteworthy article, Diamond and Morton (1978) found that the social psychological studies that were considered landmarks for opening up new areas of study were more widely cited than studies known for more rigorous controls. By Gergen's generativity standard, theories such as Rappaport's (1981) empowerment theory and Zimmerman's (2000) further development of it have been wildly successful in the field of community psychology. They have opened the topic of power, a central issue for human beings and their social organizations. Their work helped to bring a central cultural issue of the 1960s, empowering those society had marginalized, into the academy for deep reflection and study. Their efforts spawned considerable theory, research, and action concerning empowerment in community psychology and related fields like social work, political science, nursing, public health, and international development (Keys, McConnell, Motley, Liao & McAuliff, in press).

The traditional researcher may give other properties of theories with generative potential less attention and instead consider them sources of error variance to control or eliminate in theory development and research design. These include dimensions of human diversity regarding race/ethnicity, gender identity, sexual orientation, disability, social class, and their intersections. Moreover, they may include power relationships in the world at large and in research settings and relationships with community members more generally. Finally, they may also include other variables of importance, yet often overlooked in research with human beings in highly controlled

settings. Consequently, the internal validity of traditional, theoretically driven research may be high but the external, ecological, and constituent validities of such research are not. Hence, the results may not be readily generalizable to other settings and may not even be replicable in other laboratories. The theories that emerge from and are tested by such methods may relate to epiphenomena engineered in laboratory contexts but are rarely known in the world at large. While Jason and colleagues (2016) steer their line of reasoning away from these pitfalls, they may still be present and so may create risks for researchers focusing too narrowly on rigor and prediction to the exclusion of other valuable properties of theory such as description and generativity.

Not only are there problems with a single-minded focus on simplicity to attain predictability, a progressively inclusive science like community psychology adds great value to our understanding of important, actual phenomena. By serving on an IRB board for two years and living with people with disabilities for another two years, Katie McDonald developed the life experience, which along her research expertise enabled her to include both IRB members and intellectual disability researchers together in a study for the first time. She was able to explore how IRB members and researchers use their power to make decisions about including people with intellectual disabilities in research (McDonald & Keys, 2008). Through studying over many years using qualitative, descriptive methods, Gruber and Trickett (1987) were able to identify the complexity of trying to empower students and parents as well as teachers in a school setting. This finding was not predicted, yet provided a powerful cautionary note. It illustrated how complex and challenging the seemingly simple process of empowering others can be. Balcazar et al.'s (2012) account of how immigrant families empowered themselves was only possible because of the involvement of Bibiana Adames who as a

graduate student supported the families in many ways over several years.

In each of these examples, the approach to research was to draw on the richness of life experience, including that of the researcher, and to use qualitative and at times quantitative methods to try to understand the experience, which had not been previously explored by researchers. Such science seeks to understand people in settings not previously studied and thereby opens up new ground for study yielding important new insights and theories. This kind of inclusive, generative research is one of community psychology's signature contributions. This comes less from a focus on the falsifiable predictions of one's own specific theory and more from a focus on the depth of understanding of others' reality. It takes the role of the participant-conceptualizer seriously and thereby enables the researcher to more fully describe the phenomenon of interest. It also leads readily to further scientific exploration and often to pragmatic involvement.

Generativity is not simply offering complexity for complexity's sake, but rather helps us understand the phenomena of interest more thoroughly and often challenges the assumptions and theory from which simpler views arose. McDonald and Keys (2008) called attention to the need to examine how powerful individuals use their authority, a question largely overlooked in previous empowerment research. Gruber and Trickett (1987) raised the issue of the difficulty of sustaining the transactions that fostered the empowerment of groups previously not empowered. Many of these transactions were not sustained and as a result, students or parents were only partially empowered at best. Balcazar et al. (2012) showed how poor families with deaf children found strength by joining together. This strength grew when the parents were opposed and threatened by the established social service agency that had offered them their primary support, a somewhat surprising success for the parents.

Each of these studies opens up new avenues for study and theory by virtue of its generative approach and compelling findings.

To this point I have suggested that testable theories with falsifiable predictions are the scientific equivalent of "clear notes" that have scientific value as Jason et al. (2016) have maintained. However, the focus of community psychology has been less on playing and enjoying clear notes and more on better appreciating the cacophony of greater complexity offered by the entire orchestra. Jason et al. (2016) offer a distillation of complexity into theory as an alternative to simple theory and this may be desired. However, there is always risk that such a focus will go down the path that it often has in the past, toward oversimplification. In appreciating cacophony lies the path to generativity, a highly valued goal of community science. To develop this point further, let me draw on my co-editors and my experience in reviewing over 60 chapters for the forthcoming *Handbook of Community Psychology (*Bond, Serrano-García, & Keys, in press a). This experience suggests rather strongly that community psychology seems to be evolving away from the traditional and the predictive and moving more toward the generative and exploratory in science. Community psychologists are using theory and related research to better understanding the complexities of power, the impacts of oppression and the delights of liberation (Bond, Serrano-García, & Keys, in press b; Montero, Sonn & Burton, in press).

These trends tend to be critical of current thinking and research and call for a reorientation of community psychology away from traditional scientific values and methods toward a more community-centered approach to theory and research. This kind of critical and liberating approach is profoundly generative. At its best, this approach may be transformative in that it gives voice to community members who have not been heard in the past regarding issues important to them. It may motivate community theorists

to attend more fully to the power structures that condition our perceptions, thoughts, feelings, and behaviors in society and provides science new perspectives and issues to consider. As Jason and colleagues (2016) note, community psychology is moving beyond logical positivism and its immediate descendants. Instead the field is considering social constructivism, perspectivism, pragmatism, feminism, and critical theory, among others, as it develops a rich mix of philosophies of science to support its complex, generative conceptual work (Tebes, in press).

Also in the new handbook are trends toward more multi-level interventions, interdisciplinary collaboration, and voices from beyond North America. There are developments and applications of core concepts of community psychology like empowerment, prevention, social settings, community participation, and diversity (Bond, Serrano-García, & Keys, in press b). It is possible for these trends to lead to more specific theories and falsifiable propositions to test. However, it seems more likely they will lead to greater awareness of the multi-faceted qualities of community phenomena. This enhanced awareness may lead to more generative theory and exploratory studies of the relationship between factors at different levels of intervention, the psychological assumptions challenged by different disciplinary perspectives, and the application and further development of core concepts. On the whole these trends seem likely to make descriptions of greater complexity and may lead to more variability and less predictability and control. Perhaps more precision will result in some cases. Prediction, control, and other traditional scientific values clearly still have an important place in community psychology and can foster scientific progress by testing hypotheses that distill complexity into essential information in particular circumstances. Nonetheless, the field is often better able to explore issues from a pluralistic approach to philosophies of

science and method. As new factors are recognized, their generativity for new thinking, research and intervention seem likely to overshadow their contributions to prediction and control.

The new *Handbook of Community Psychology* considers a variety of research approaches, including those that would help with theory-building in the classic sense, such as hierarchical linear modeling and meta-analysis (Bond, Serrano-García & Keys, in press). Qualitative methods and participatory action research also are well-represented methods that may likely be used in pursuit of generativity and help expand our perspectives. Diversity is another major theme in this handbook, with considerable attention given to conceptualizing crucial dimensions such as social class, age, disability, sexual orientation, gender, and race/ethnicity. Attention is also devoted to examining interventions with specific groups including the impoverished, elderly, diabled, LGBT community, and African American youth. Trickett and Beehler (in press) make us aware that diversity challenges any simple, direct route to validating empirically based interventions, another traditional approach to creating knowledge that often has unrecognized limitations.

An additional relevant handbook theme is the importance of context. Community psychology has attended to context in multiple forms, perhaps more so than any other sub-discipline of psychology. The attention to context follows from community psychologists' great concern with people in particular settings and as part of larger social units. Situating people in context adds more layers to grapple with as we seek to describe and understand phenomena across settings and makes the goals of prediction and control more challenging. The challenge of describing and understanding multi-faceted interventions and their contexts with distinct groups is a major effort because there also has to be a focus on whether they are effective and provide empirical validation to

theories and interventions. This argument questions the adequacy of current evidence for interventions that claim to be empirically based and could be extended to challenge the adequacy of evidence for existing theories in much of contemporary psychology.

To digress, it could be argued that the genius of generativity underlies both Kelly's antidote for arrogance (Kelly, 1969) and Rappaport's rule (Rappaport, 1981). By broadening our focus to consider other factors through generativity, we can readily adopt an ecological view of human beings. This view can be an antidote to arrogance that keeps us from assuming a self-satisfied stance about our capacities to create change. Rappaport's rule says: when everyone agrees with you, worry. A generative view would say if all agree, enough different people might not have considered enough different factors. It is time to broaden our approach and seriously consider alternatives as yet unexamined. The scanning of generativity may be as valuable, if not more so, than the testing of predictions.

In closing, all of this is not to disparage the values of clearly stated theory and falsifiable hypotheses, but to place them in context and to say that they are not the be all and end all of scientific theory. As an integral part of community psychology, they have much to offer. However, if pursued single mindedly, they could function like a straitjacket for the scientific progress. Other criteria for theory like generativity have great value as well. There would be little we could predict and then affirm or falsify if it had not been generated in earlier theory and research.

Jason et al (2016) argue prediction and control have not been the central focus for theory in community psychology and should be accorded more attention. Our handbook editing affirms their premise by showing that prediction and control have not been the focus of community psychology in the past, are not its focus in the present, and not likely to be its focus in the future. However, the other contributions of community psychology

theory seem underappreciated by Jason, his colleagues and especially some of the sources they cite (Jason et al., 2016). To harken back to the opening paragraphs, the clear note played well is part of many a wonderful musical composition that adds to the overall experience of listening to music, even as community psychology overall gives priority, as it should, to learning to appreciate the full orchestra playing greater and greater cacophony.

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