



# PHILOSOPHY, COMMUNITY-BASED INTERVENTIONS AND EPIDEMIOLOGY

John W. Murphy

College of Arts and Sciences, Department of Sociology University of Miami 5202 University Dr. Merrick Building, Rm 120 Coral Gables, FL. 33146, USA Telephone: (305) 284-6157 E-mail: j.murphy@miami.edu

Received 13 June, 2014; accepted for publication 13 June, 2015

DOI:10.13165/SMS-15-7-1-04

Introduction

Uniwersytet

Wrocławski

Epidemiology has been a regular part of traditional social planning. In this case, the general idea is to determine the level of a problem in certain geographical or social region. Calculations are often made, for example, of the incidence and spread of a disease<sup>1</sup>. Typically these estimations are based on the presence of various empirical referents, particularly certain demographic and environmental factors.

1 Friedman, G. Primer of Epidemiology. NY: McGraw-Hill.1994.

Socialinių mokslų studijos / Societal Studies

The so-called "new public health" arose against this strategy to design and implement more socially sensitive assessments and interventions<sup>2</sup>. Some critics contend that this approach can be traced to the Lalonde Report issued by Marc Lalonde, the minister of health in Canada during the early 1970s. In this document the idea was broached that the medical model may have severe limitations, specifically with regard to prevention<sup>3</sup>. Too much emphasis, in short, is devoted to the individual and disease. Accordingly, the focus should be on the "health field" – a more holistic and community-sensitive approach – thereby encouraging a more encompassing strategy to health assessment and the creation of interventions.

But for the most part, communities are still treated as natural sources of data, with little emphasis placed on how persons define their problems and possible remedies. The strength of the new public health, on the other hand, is that communities are viewed to be dynamic and intricate, with rich cultures and knowledge bases that influence perceptions of health, illness, and successful interventions. Planning, accordingly, is guided by an ecological perspective and is considered to be holistic.

In general, the thrust of this change is that communities are portrayed to be complex, and should be investigated more closely than is possible when the focus is on empirical indices. If communities consist of interlocking processes, and have a "life-course" or history, a broader perspective is needed to study adequately these groups<sup>4</sup>. Specifically important is that a community should not be identified solely with empirical and thus lifeless measures.

For this reason, the new public health is often associated with communitybased planning<sup>5</sup>. Nonetheless, this characterization may not be correct. Although process and context are incorporated into the new orientation, how a community is constructed is ignored. Hence the biography of a neighborhood, along with the implied mores and proclivities, often remains hidden.

In order to become community-based, advocates of the new public health epidemiology must begin to appreciate the embedded nature of all social phenomena, including diseases and cures. With all behavior mediated by participation, and therefore socially constructed, reliable observations must emphasize more than the empirical qualities of persons and their environments. Effective interventions, accordingly, depend on epidemiology becoming more attuned to the interpretive character of a community's reality.

<sup>2</sup> MacKain, S., Elliott, H., Busby, H., and Popay, J. "Everywhere and Nowhere:Locating and Understanding the "New" Public Health," *Health and Place* 9(3), 2003.p. 219-229.

<sup>3</sup> Hunter, D. Public Health: Historical Context and Current Agenda. In *Public Health:Social Context and Action*, ed. Scriven, A. and Garman, S. Berkshire, UK: Open University Press. 2007. pp. 8–19.

<sup>4</sup> Tulchinshy, Th. H. and Varavikova, E. A. What is the New Public Health? In *Public Health Reviews* 32(1). 2010. pp. 25–53.

<sup>5</sup> Frenk, J. The New Public Health. In Annual Review of Public Health 14. 1993. pp. 469–490.

## Traditional Public Health

The guiding principle of the traditional model of public health is the identification of "high risk" populations<sup>6</sup>. This task is accomplished by trying to specify the factors that have contributed to this condition. Standard empirical referents such as age, education level, income, and geographic location, for example, are invoked to calculate the likelihood that a problem will emerge in a specific population.

Associated with these empirical indicators are assumptions about both the presence of pathogens and the buffers, or "protective factors," necessary to forestall the onset of an illness <sup>7</sup>.A neighborhood with a low level of education and high unemployment, for example, is considered to be problematic, or a high risk location, due to the low quality of the buffers available. A poor neighborhood with few preventive buffers, such as education or stable families, is thought to have an unfavorable "risk ratio"<sup>8</sup>.

Eventually a "cause-effect onset matrix" is established, along with probable outcomes of various interventions<sup>9</sup>. In effect, an algorithm is introduced with certain values attached that have specific parameters. Following the introduction of a range of inputs, such as income levels, education, or quality of housing, comparisons can be made between communities. This constellation of variables, weighted in a specific manner, can illustrate the location where an illness or crime may erupt.

Clearly this methodology represents the worst sort of number crunching. Variables are decontextualized and given exact identities, stripped of any social contingencies<sup>10</sup>. Without a context these data can be standardized to facilitate data processing, without any fear of being distorted. The end product is a statement of probability about the likelihood of an event occurring in a particular locale.

The imagery that supports this kind of analysis is very realistic. Terms such as barriers, structures, networks, and systems, for example, are used to describe communities. Additionally, diseases are imagined to travel along certain channels, through specific networks, and reach certain barriers. The implication is that the factors that influence the on-set of an illness are real and substantial, along with those that promote health. Epidemiology, in this sense, is dealing with facts and laws related to the causes, pathways, and inhibitors of illness.

<sup>6</sup> Schwartz, Sh., Susser, E., and Susser, M. A Future for Epidemiology? In *Annual Review of Public Health* 20. 1999. pp. 15–33.

<sup>7</sup> Lucas, K. and Lloyd, B.. Health Promotion. Thousand Oakes: Sage. 2005.pp. 75-77.

<sup>8</sup> Kellehear, A. and Sallnow, L. Public Health and Palliative Care: An Historical Overview. In International Perspectives of Public Health and Palliative Care, ed. by Sallnow, L. Suresh, K. and Kallehear, A. London: Routledge. 2012. pp. 1–12.

<sup>9</sup> Schwartz, Susser, and Susser, supra note 6.

<sup>10</sup> Weed, D. L. Beyond Black Box Epidemiology, In American Journal of Public Health. 88(1), 1998. pp. 12–14.

In fact, in standard epidemiological assessments the principle of "natural causality" is thought to be operative<sup>11</sup>. That is, specific empirical elements are thought to foster, or cause, certain outcomes. Furthermore, most often these linkages are described in biological terms. What could be more concrete than such a portrayal? Although biological descriptions are metaphorical, they portray the social world in very believable terms. And once the associated rules are discovered, and the "disease vectors" are identified, intercepting the spread of a problem is possible.

Due to this mode of calculating risk, traditional epidemiology is often characterized as operating within a "black box"<sup>12</sup>. In this regard, only elements that can be readily observed are introduced into an analysis. Furthermore, anything connected with subjectivity is thought to be fuzzy and unreliable. All determinations, therefore, are the result of inputs that are (re)arranged by mathematical models to generate outputs, or risk estimates.

Nonetheless, due to this parsimony, the resulting descriptions can begin easily to drift away from a community. The resulting descriptions, in other words, can become increasingly abstract and mask the actual disease process. How barriers and networks are presumed to function in these models, for example, may begin to obscure the ways in which persons interpret and respond to events.

In essence, what occurs is that an examination of substance is equated with understanding. In other words, whatever can be readily measured becomes the focus of attention, while any other source of knowledge is ignored. The personal or collective experiences of these so-called objective factors tend to fall into this latter category, because this dimension is thought to defy rigorous measurement. Within this framework, interpretation is envisioned to be elusive <sup>13</sup>

What is overlooked by this imagery is the actual interaction that constitutes and sustains a community. How persons relate to one another, and possibly facilitate or retard the disease process, is equated with the structural factors that are presumed to either transmit or inhibit the spread of a pathogen. But assumed by this entire process is that facts are empirical and awaiting discovery by those who are trained to ignore the subjective side of life. Indeed, within this empirical framework, this human property is thought to derail the search for the causes of illness.

Using terms such as impact and outcome, for example, tends to conceal how perception mediates social existence, even the onset of disease. The point of this critique lodged by community-based planners is that factors do not simply have impact on persons; certain conditions, likewise, do not necessarily produce particular

<sup>11</sup> Susser, M. and Susser, E. Choosing a Future for Epidemiology: II. From Black Boxes to Chinese Boxes and Eco-Epidemiology. In American Journal of Public Health 86(5).1996. pp. 674–677.

<sup>12</sup> Susser, E. Eco-epidemiology: Thinking Outside the Black Box. In *Epidemiology* 15(5). 2004. pp. 519–520.

<sup>13</sup> Krieger, N. Epidemiology and the People's Health. NY: Oxford University Press. 2011.

outcomes. Persons are not this passive but engage their worlds and react to how events are interpreted within a community.

But even within traditional epidemiology the attempt has been made to temper the prevailing determinism. Take, for example, the traditional "epidemiological triangle," which consists of hosts, agents, and environmental factors<sup>14</sup>. The basic idea is that disease on-set involves a host who has an effect on this process.

What should be noticed, in terms of this triangle, is how persons interact with their environment and one another. But in the end, the models adopted by traditional public health provide concrete but socially uninformed descriptions of so-called "illness behavior." In this regard, causal statements are provided that specify the relationships between, for example, environmental degradation and illness, without giving much attention to how persons perceive their environment, evaluate their health, or decide to pursue help. Although a human factor is present in this triangle, which could be treated as introducing interpretation and agency, an almost natural and mechanical link is presumed to exist between these three elements.

## The New Public Health

The aim of the new public health is to avoid the reductionism linked to traditional epidemiology. For this reason, an ecological strategy is adopted, sometimes known as "eco-epidemiology"<sup>15</sup>. The general critique of the traditional perspective is that parsimony in building models may improve clarity but is also misleading. For example, within the web of causation time and place are ignored<sup>16</sup>. In this sense, the world that is constructed by communities is obscured.

Within an ecological framework persons are understood to be part of a seamless web of influences, including physiology, culture, and the economy. In this regard, Engel's<sup>17</sup> well known call for a "bio-psycho-social" agenda is representative of this trend. Due to this ecological perspective, the isolation of risk factors is no longer the guiding principle in any judgment of need or remediation. Explanations of behavior, accordingly, are expected to be holistic and take into account how persons interact with others and their surroundings.

The phrase that has been adopted to capture this sentiment is "person-inenvironment"<sup>18</sup>. In this sense, person and environment are not two separate

<sup>14</sup> Cwikel, J. G. Social Epidemiology. NY: Columbia University Press. 2006. p.7

<sup>15</sup> Baum, F. The New Public Health: Force of Change or Reaction. In *Health Promotion International* 5(2). 1990. pp. 145–150.

<sup>16</sup> Krieger, supra note 13.

<sup>17</sup> Engel, G. The Need for a New Medical Model: A Challenge to Biomedicine. In Science 196. 1997. pp. 129–136.

<sup>18</sup> De Hoyos, G. Person-in-Environment: A Tri-level Practice Model, In Social Casework 70(3).1989. pp. 131–138.

variables. Instead, through participation, persons are understood to alter themselves and change their surroundings. This interaction should be the focus of attention, and is thought to provide novel insight into the conditions that influence behavior but elude causal thinking.

The point of this ecology, therefore, is to extend any investigation in at least two directions. At the individual level, persons are presumed to have a "life-course," and are approached in a holistic manner<sup>19</sup>. Instead of passing through developmental stages *ad seriatim*, accumulative effects are considered to be important. The on-set or resistance to disease, for example, should not be viewed as a unique position in a causal chain. Persons, instead, perceive their pasts selectively, reinterpret events, and react to constellations of factors.

In this regard, the effects of life accumulate. Because persons engage their lives, the past is carried forward through memory and deeds<sup>20</sup>. This biography, accordingly, should be the cornerstone of any predictions about future behavior. In this sense, a person's or community's life is a selective construction and represents a cumulative process.

On the other hand, persons are envisioned to exist in an environment<sup>21</sup>. As a direct challenge to dualism, a web of influences is presumed to be operating. Persons exist, for example, in a family, school system, and workplace. These factors, furthermore, interact with their inhabitants along with one another. Traditional causal imagery, in this sense, is thought to be too simplistic to capture this condition, since a myriad of interactions are occurring at any time at different levels.

Multiple descriptions and parallel interventions are thus required to address adequately any problems<sup>22</sup>. Any assessments and correctives must be focused, and sufficiently comprehensive, but textured and situationally sensitive. A person-inenvironment strategy is thus vital at this juncture of inaugurating an intervention. The so-called "target" of these efforts is simply broader and more variegated than is presumed to be possible in traditional epidemiological investigations.

This attempt to add breadth to epidemiological analysis has been both welcome and productive. Clearly, better analyses and effective interventions can be undertaken. For example, the introduction of a sociological dimension has had an effect on

<sup>19</sup> Elder, G. H. Perspectives on the Life-course. In *Life Course Dynamics*, ed. by Elder, G.H. Ithaca, NY: Cornell University Press. 1985. pp.23-49. Berkman, L. F. and Kawachi, I. A Historical Framework for Social Epidemiology. In *Social Epidemiology*, ed. by. Berkman, L. F. and Kawachi, I. NY: Oxford University Press. 2000. pp. 2–12.

<sup>20</sup> Berkman, L. F. and Kawachi, I. A Historical Framework for Social Epidemiology. In Social Epidemiology, ed. by. Berkman, L. F. and Kawachi, I. NY: Oxford University Press. 2000. pp. 2–12.

<sup>21</sup> Krieger, N. Theories for social Epidemiology in the 21<sup>st</sup> Century: An Ecological Perspective. In *International Journal of Epidemiology* 20(4). 2001. pp. 668–677.

<sup>22</sup> Bronfenbrenner, U. Ecological Models of Human Development. In International Encyclopedia of Education 3.1994. pp. 1643–1647.

explaining both health disparities between ethnic groups and the promotion of well-being that has been illuminating<sup>23</sup>. The importance of personal and community history, among both academic and practitioners, is recognized nowadays with little fanfare. On many levels – mind-body and individual-society – holism is understood to produce better information and clinical practice.

The obvious aim of this ecological holism, as indicated by Kelly<sup>24</sup> and others, is to become attuned to social and cultural considerations, and perhaps gain some insight into their interaction. The problem, however, is that ecology has not necessarily abandoned empiricism. As a result, process is mistaken for biography. Ecological models, in this sense, are comprehensive but deal with variables as if these factors represent the empirical features of a community.

Another consideration is that ecological models convey a sense of naturalism<sup>25</sup>. That is, like the physical environment, the social world appears to be integrated with all parts naturally related. The connections between elements appear to be almost "biotic"<sup>26</sup>. The problem with this analogy is that social life is de-animated, or transformed into myriad of objects that are connected by inviolable laws. In this sense, a holism is present that ignores the original intent to treat humans in a more intimate way than in the past.

But biography is more than a holistic process and, in fact, provides insight into another dimension of social existence. Instead of revealing merely a wider range of variable interaction, the focus of biography is construction and interpretation. What facts mean, or how they are interpreted and evaluated in everyday discourse, is the focus of biography, rather than the impact of an array of variables, even broadly understood. These meanings, accordingly, have a lot to do with how persons identity problems, respond to conditions, and seek remedies.

## Community-based Epidemiology

Because a community is not simply a place or a collection of empirical traits, but a collectively constituted reality, a new approach is needed to epidemiology. Neither processes nor social indicators, accordingly, are appropriate sources of information<sup>27</sup>. Everyday life in a community is much more complex than is revealed by typical epidemiological data, even when these variables are placed in an ecological context.

<sup>23</sup> Barry, B. Why Social Justice Matters. Cambridge, UK: Polity. 2005.

<sup>24</sup> Kelly, J. G. Becoming Ecological: An Expedition into Community Psychology. NY: Oxford. 2006.

<sup>25</sup> Rotabi, K. S. Ecological Theory from Natural to Social Science or Vive Versa? A Brief Conceptual History for Social Work. In *Advances in Social Work* 8(1). 2007. pp. 113–129.

<sup>26</sup> Mattelart, A. and Mattelart, M. Theories of Communication. Thousand Oakes, CA: Sage.1998.

<sup>27</sup> Wallerstein, N. B., Yen, I. H., and Syme, S. L. Integration of Social Epidemiology and Community-Engaged Interventions to Improve Equity. In *American Journal of Public Health* 101(5), 2011. pp. 822–830.

Due to the fact that communities are constructed or existential, biography becomes important; the tales these persons tell about themselves hold the key to understanding their constructed reality. Nonetheless, traditional empirical data should not be dismissed completely<sup>28</sup>. For example, knowing how many persons have been vaccinated in a community may be helpful to determine when or where an outbreak of a disease might be expected. Likewise, education level might provide some insight into the knowledge base persons have about a particular disease. Clearly economic deprivation and illness are related<sup>29</sup>. But in terms of understanding the course of a disease, or how persons will react to health issues, a lot if vital information is missing.

Another important consideration at this juncture is that such empirical data are meaningful only within the very limited framework supplied by certain theories or interests. Outside of a conceptual environment, this information has little meaning or relevance. Specifically important, these empirical data should not be allowed to conceal the story told by a community about disease. For this reason, communitybased planners search for the relevant framework, and often competing frameworks that serve to identify pertinent information and problems.

Because of the influence of participation, a community is pervaded by definitions, expectations, and perspectives. A disease does not spread, accordingly, through natural channels or networks—in a mechanistic manner—but is perceived and assessed before any problem is thought to exist. A disease, according to Aday and Anderson<sup>30</sup>, is mediated by a host of social considerations before any problems are identified. A disease does not simply arise as a response to environmental conditions, but is embedded in certain values and beliefs. How persons perceive their situation, for example, has a lot to do with how they identify their health status.

For this reason, a community-based epidemiology does not involve merely a surface examination of a community, since definitions and commitments, for example, are not empirical and simply recorded. Gaining insight into a biography thus requires more than periodic consultations with a community. Hence the thrust of a community-based epidemiology is not to simply chart changes in behavior, but to determine the meaning of these actions. In epidemiological circles, the term "embodiment" is used to describe the relationship between a problem and a community's biography<sup>31</sup>. How has the operative reasoning in a community, in other words, been constructed and enforced?

<sup>28</sup> U'Ren, R. Social Perspective. Toronto: University of Toronto Press. 2011.

<sup>29</sup> Williams, D. R. and Sternthal, M. Understanding Racial-Ethnic Disparities in Health: Sociological Contributions.In *Journal of Health and Social Behavior* 15(1). 2010. pp. 15–27.

<sup>30</sup> Aday, L. A. and Andersen, R.A Framework for the Study of Access to Medical Care. In *Health Services Research* 9(3). 1974. pp. 208–220.

<sup>31</sup> Krieger, supra note 13.

In this sense, rather than merely described, community members provide access into how they construct their understanding of disease or cure. An issue related to communitybased methodology is important at this juncture: That is, intense collaboration is necessary between planners and a community, if the biographies of these persons are going to be adequately appreciated<sup>32</sup>. When persons are studied objectively the image is suggested that they are poked and probed in order to elicit responses.

Engaging a community, however, is not a value-free endeavor but requires dialogue and commitment. In this regard, those who construct a reality will not necessarily share this knowledge with anyone, given the intimate nature of this exchange. A special sort of relationship is crucial to gaining access to this privileged information. After all, the biography of a person or group is a precious story that is often guarded.

Empirical data on health status, for example, are quite superficial when divorced from past experiences, perceived capabilities, and future expectations<sup>33</sup>. Likewise, the likelihood of pursuing treatment is not merely a matter of having information on hand about disease on-set or progression, or even knowledge about sufficient resources, but relates to how health and illness are perceived and evaluated. Richard Zaner<sup>34</sup>, therefore, declares that health is one of the most existential issues that persons confront.

How social factors – such as resources, accessibility, and seriousness of a problem – are valued and prioritized contribute a lot to whether treatment will be sought<sup>35</sup>. Placing variables in an algorithm, on the other hand, distorts how persons make decisions about their health. Rather than trying to optimize the rationality of their decisions, they base their actions on expectations that relate to collective memories, past experiences, and the perceived chances of success<sup>36</sup>. Direct involvement in a community, accordingly, helps to insure that epidemiological assessments are informed by the concepts and judgments used by persons to arrange their everyday affairs, including their health status. In this way, how persons make decisions about their health are brought alive in a manner that extends beyond probability.

The general point of community-based epidemiology is that health status has little meaning divorced from the biography of a community<sup>37</sup>. Nonetheless,

<sup>32</sup> Brown, Ph. When the Public Knows Better: Popular Epidemiology. In *Environment* 35(8). 1993. pp. 16–40.

<sup>33</sup> Shehadeh, N. The Ever Evolving Concept of New Public Health: Book Review. In Californian Journal of Health Promotion 8(1). 2010. pp. 82–87.

<sup>34</sup> Zaner, R. Ethics and the Clinical Encounter. Englewood Cliffs: Prentice-Hall. 1988.

<sup>35</sup> Anderson, L. M., et al Culturally Competent Healthcare Systems. In American Journal of Preventive Medicine 24(3). 2003. pp. 68–79.

<sup>36</sup> Simon, H. A. A Behavioral Model of Rational Choice. In *The Quarterly Journal of Economics* 69(1). 1955. pp. 99–118.

<sup>37</sup> Little, M. Assignments of Meaning in Epidemiology In Social Science in Medicine 47(9). 1998. pp. 1135–1145.

biography extends beyond holism. For example, the identification and spread of a disease does not represent a natural progression or a causal connection between events, but includes definitions, value judgments, and a willingness to act. From a community-based perspective, how the on-set of a disease is likely to occur includes these and other existential considerations.

This personal or collective mediation is what community-based planners have in mind when they claim that a disease does not necessarily follow a well-trodden path. In other words, the course of a disease is anything but routine. Planners should not be lulled into thinking that health care will be improved if the proper path to treatment is cleared, that is, the typical structural barriers are removed<sup>38</sup>. This task is not so simple!

Every path to health care, so to speak, is potentially very unique. The job of a community-based planner, therefore, is to extend beyond causation to grasp the process of disease creation. The use of the phrase" disease creation" is intended to convey the idea that a disease does not occur until an issue is defined as problematic, and persons become motivated to deal with this phenomenon. Once these matters are settled, an entire disease context arises that identifies resources, accessibility, threat, and other relevant themes. A disease does not spread, accordingly, simply by diffusion along natural pathways. Such imagery overlooks how a community participates in this process.

A recent response to this omission has been the development of what Brown<sup>39</sup> and others call "popular epidemiology." Basic to this strategy is that average citizens can bring to the attention of planners specific problems that have been overlooked by these experts. These local persons, accordingly, give needed direction to any epidemiological studies, due to their familiarity with the situation. As reported by Brown, this strategy has been helpful in correcting the effects of pollution related to environmental degradation in several cities. Consistent with a community-based philosophy, the idea is that these neighbors can help to guide and motivate properly professional epidemiologists.

## Conclusion

The new public health places a community within an ecological framework, while the construction of social issues is the focus of a community-based approach. In the end, two very different approaches to holism are at work. In the first, a broad causal matrix is sought, which is more inclusive than is the case with traditional epidemiology<sup>40</sup>. A community-based epidemiology, on the other hand, emphasizes

<sup>38</sup> Snowden, L. R. and Yamada, Ann-Marie. Cultural Differences in Access to Care. In Annual Review of Clinical Psychology 1. 2005. pp. 143-166.

<sup>39</sup> Brown, Ph. Popular Epidemiology Revisited. In Current Sociology 45(3). 1997. pp. 137-156

<sup>40</sup> Kelly, J. G. Ecological Constraints on Mental Health Services. In American Psychologist. 21(6).

the perceptions of persons and the resulting biographies, rather than increasing the number of variables that are part of an assessment<sup>41</sup>.

Basically, both the traditional and new public health are sustained by realism. The traits of a community – such as stressors and buffers – are treated as empirical referents. The need to identify clearly these and other variables is thus logical and expected. After all, whether or not a disease spreads depends on a unique composition of these factors. Discovering the proper connections between these elements is thought to be essential to preventing or limiting problems.

A very different picture of epidemiology is painted from a community-based perspective. The idea that some communities lack traits, such as important buffers, and are thus overwhelmed by stressors misses a lot about disease on-set and spread. Such a portrayal is simply too sterile to capture how a community reacts to perceived threats and constructs viable alternatives. In this regard, popular epidemiology strives to incorporate average persons into the activity of identifying problems and their solutions<sup>42</sup>. The idea is that community members are knowledgeable about these issues and are motivated to improve their surroundings.

The strengths and weaknesses of a community, in this regard, are not understood to be empirical determinations but rather are biographical. Environmental factors, for example, do not automatically lull persons into inactivity or determine how they will respond to threats. In fact much of public health is predicated on changing culture and behavior<sup>43</sup>. The thrust of community-based epidemiology, in this regard, is that how persons act shapes every aspect of their realities. Promoting change, therefore, has little to do with empirical determinates, but rather the ability of persons to imagine and enact an alternative mode of existence.

Buffers, for example, should not be viewed as having natural properties within this new framework<sup>44</sup>. These characteristics, instead, are enmeshed within the reality of a community, possibly even a clash of realities. A buffer, accordingly, becomes effective due to various beliefs and the ability to act. Before an intervention can be planned successfully, therefore, these experiential mediators that pervade the spread of a disease must receive serious consideration. What constitutes a true and effective buffer can thus be appreciated.

Acknowledging these diverse knowledge bases is at the heart of a communitybased epidemiology. But the question becomes: How are these sources of knowledge discovered and interpreted correctly? After all, the quality of a so-called buffer depends on interpretation. The biography of a community, in other words, must be read

<sup>1966.</sup> pp. 535-536.

<sup>41</sup> Cornell, K. L. Person-in-Situation: History, and New Directions for Social Work Practice. In Praxis. 6. 2006. pp. 50–57.

<sup>42</sup> Brown, supra note 32.

<sup>43</sup> De Maio, F. Health and Social Theory. London: Palgrave Macmillan. 2012.

<sup>44</sup> Cwikel, supra note 14.

accurately, or interventions will likely be misdirected. What must be remembered, however, is that relevant information may be revealed in these biographies that is inconsistent with mainstream thinking. How planners read and judge the reasoning in these stories is thus very important. Inconsistency with traditional beliefs should not discredit automatically the narrative provided by a community.

Dismissing any findings as irrational *a priori* would be a serious misstep, at least from a community-based perspective. The reasoning that is exhibited may be unusual, or different from what is expected, but never lacks rationality or purpose. This unique form of "mundane reasoning", instead, has local relevance and informs the behavior of a community's members, including their health status<sup>45</sup>. This mode of reason, accordingly, is the appropriate base for policies and practices that are relevant to a community.

## References

- Aday, L. A. and Andersen, R.A Framework for the Study of Access to Medical Care. In *Health Services Research* 9(3). 1974. pp. 208-220.
- Anderson, L. M., Scrimshaw, S. C., Fullilove, M., Fielding, T. Jonathan E., Normand, J. and The Task Force on Preventive Services. Culturally Competent Healthcare Systems. In American Journal of Preventive Medicine 24(3). 2003. pp. 68-79.
- Barry, B. Why Social Justice Matters. Cambridge, UK: Polity.2005
- Baum, F. The New Public Health: Force of Change or Reaction. In *Health Promotion International* 5(2). 1990. pp.145-150.
- Berkman, L. F. and Kawachi, I. A Historical Framework for Social Epidemiology. In Social Epidemiology, ed. by. Berkman, L. F. and Kawachi, I. NY: Oxford University Press. 2000. pp. 2-12.
- Bronfenbrenner, U. Ecological Models of Human Development. In *International Encyclopedia of Education* 3.1994. pp. 1643-1647.

- Brown, Ph. Popular Epidemiology Revisited. In *Current Sociology* 45(3). 1997. pp. 137-156
- Brown, Ph. When the Public Knows Better: Popular Epidemiology. In *Environment* 35(8). 1993. pp. 16-40.
- Cornell, K. L. Person-in-Situation: History, and New Directions for Social Work Practice. In *Praxis*. 6. 2006. pp. 50-57.
- Cwikel, J. G. Social Epidemiology. NY: Columbia University Press. 2006.
- De Hoyos, G. Person-in-Environment: A Tri-level Practice Model, In Social Casework 70(3).1989. pp. 131-138.
- De Maio, F. Health and Social Theory. London: Palgrave Macmillan. 2012.
- Elder, G. H. Perspectives on the Lifecourse. In *Life Course Dynamics*, ed. by Elder, G.H. Ithaca, NY: Cornell University Press. 1985. pp.23-49.
- Engel, G. The Need for a New Medical Model: A Challenge to Biomedicine. In *Science* 196. 1997. pp. 129-136.
- Friedman, G. Primer of Epidemiology. NY: McGraw-Hill.1994.
- 45 Pollner, M. Mundane Reason. Cambridge, UK: Cambridge University Press. 1987.

- Frenk, J.The New Public Health. In Annual Review of Public Health 14. 1993. pp. 469–490.
- Hunter, D. Public Health: Historical Context and Current Agenda. In *Public Health: Social Context and Action*, ed. Scriven, A. and Garman, S. Berkshire, UK: Open University Press. 2007. pp. 8-19.
- Kellehear, A. and Sallnow, L. Public Health and Palliative Care: An Historical Overview. In *International Perspectives* of *Public Health and Palliative Care*, ed. by Sallnow, L. Suresh, K. and Kallehear, A. London: Routledge. 2012.pp.1-12.
- Kelly, J. G. Becoming Ecological: An Expedition into Community Psychology. NY: Oxford. 2006
- Kelly, J. G. Ecological Constraints on Mental Health Services. In American Psychologist. 21(6). 1966. pp. 535-536.
- Krieger, N. Epidemiology and the People's Health. NY: Oxford University Press. 2011.
- Krieger, N. Theories for social Epidemiology in the 21<sup>st</sup> Century: An Ecological Perspective. In *International Journal of Epidemiology* 20(4). 2001. pp. 668-677.
- Little, M. Assignments of Meaning in Epidemiology In Social Science in Medicine 47(9). 1998. pp. 1135-1145.
- Lucas, K. and Lloyd, B.. Health Promotion. Thousand Oakes: Sage.2005.
- MacKain, S., Elliott, H., Busby, H., and Popay, J. "Everywhere and Nowhere: Locating and Understanding the "New" Public Health," *Health and Place* 9(3), 2003. p. 219-229.
- Mattelart, A. and Mattelart, M. Theories of Communication. Thousand Oakes, CA: Sage.1998.
- Pollner, M. Mundane Reason. Cambridge, UK: Cambridge University Press.1987.
- Rotabi, K. S. Ecological Theory from Natural to Social Science or Vive Versa? A Brief Conceptual History for Social Work. In Advances in Social Work 8(1).

2007. pp. 113-129.

- Simon, H. A. A Behavioral Model of Rational Choice. In *The Quarterly Journal of Economics* 69(1). 1955. pp. 99-118.
- Schwartz, Sh., Susser, E., and Susser, M. A Future for Epidemiology? In Annual Review of Public Health 20. 1999. pp. 15-33.
- Shehadeh, N. The Ever Evolving Concept of New Public Health: Book Review. In *Californian Journal of Health Promotion* 8(1). 2010. pp. 82-87.
- Susser, M. and Susser, E. Choosing a Future for Epidemiology: II. From Black Boxes to Chinese Boxes and Eco-Epidemiology. In *American Journal of Public Health* 86(5).1996. pp. 674-677.
- Susser, E. Eco-epidemiology: Thinking Outside the Black Box. In *Epidemiology* 15(5). 2004. pp. 519-520.
- Snowden, L. R. and Yamada, Ann-Marie. Cultural Differences in Access to Care. In Annual Review of Clinical Psychology 1. 2005. pp. 143-166.
- Tulchinshy, Th. H. and Varavikova, E. A. What is the New Public Health? In *Public Health Reviews* 32(1). 2010.pp. 25-53.
- U'Ren, R. Social Perspective. Toronto: University of Toronto Press. 2011.
- Wallerstein, N. B., Yen, I. H., and Syme, S. L. Integration of Social Epidemiology and Community-Engaged Interventions to Improve Equity. In American Journal of Public Health 101(5), 2011. pp. 822-830.
- Williams, D. R. and Sternthal, M. Understanding Racial-ethnic Disparities in Health: Sociological Contributions. In *Journal of Health and Social Behavior* 15(1). 2010. pp.15-27.
- Weed, D. L. Beyond Black Box Epidemiology, In American Journal of Public Health. 88(1), 1998. pp. 12-14.
- Zaner, R. Ethics and the Clinical Encounter. Englewood Cliffs: Prentice-Hall. 1988.

John W. Murphy, College of Arts and Sciences, Department of Sociology, University of Miami, Florida, United States of America. Research interests: sociological theory, globalization, community – based investigation.