On the nature of programs:
health promotion programs as action

Sobre a natureza dos programas:
os programas de promoção da saúde como ação

Louise Potvin [1]

Abstract *Assuming that sound methodological indications regarding the evaluation of health promotion programs should be rooted in a critical reflection on the nature of health promotion programs, this paper reviews two traditional ontological perspectives at the basis of most scientific activity. While empirical realism conceptualises programs as natural objects, idealism and relativism strictly confine programs in the realm of representations and models. Both ontological perspectives however are unsatisfying for health promotion programs. It is suggested that critical realism which proposes a three-layer ontology offers a better framework for conceiving health promotion programs. In this ontology, the nature of programs lies in actions undertaken to create the conditions by which social causal mechanisms are triggered. Ultimately locating programs in the realm of practice.*
Key words *Health promotion program, Ontology, Critical realism*

Resumo *Partindo do pressuposto de que indicações metodológicas seguras com respeito à avaliação de programas de promoção da saúde devem se fundamentar numa reflexão crítica acerca da natureza dos referidos programas, o presente artigo faz uma revisão de duas perspectivas ontológicas tradicionais na base da maior parte da atividade científica. Enquanto para o realismo empírico os programas são objetos naturais, o idealismo e o relativismo os confinam rigorosamente ao domínio das representações e dos modelos. Ambas as perspectivas ontológicas, porém, deixam a desejar quanto aos programas de promoção da saúde. Sugere-se que o realismo crítico, o qual propõe uma ontologia em três camadas, oferece uma melhor estrutura para a compreensão dos programas de promoção da saúde. Nesta ontologia, a natureza dos programas reside em ações empreendidas para se criar as condições pelas quais engatilham-se mecanismos causais sociais, situando, em última análise, os programas no domínio da prática.*
Palavras-chave *Programa de promoção de saúde, Ontologia, Realismo crítico*

[1] GRIS – Université
de Montréal.
P.O. Box 6128, Succursale
Centre-Ville, Montréal,
QC H3C 3J7, Canada.
Louise.Potvin@Umontreal.CA

It seems to me that one of the first steps in trying to describe a domain of research is the proper identification of the class of objects that compose the domain's universe of interest. In general, such definitions not only circumscribe the width and breadth of the phenomena of interest in a field, but they also often provide in depth discussions about the nature of these objects (how real they are) and how can one know about them (the subject/object relationship). These are usually referred to, respectively, as ontological and epistemological questions. The discussion of these questions define the implicit criteria for judging the legitimacy of a scientific practice. Indeed, it is because a group of scientists agree on the nature of the objects of their enquiry and on the apparatus needed to produce knowledge, that such a group can legitimately claim to belong to a community of scientists, a discipline or a school. Mainstream science textbooks usually dedicate the first few introductory chapters to those questions (McQueen & Anderson, 2001).

Although not yet constituted as a discipline, health promotion claims to be a legitimate scientific domain of research. Therefore, since most of health promotion research is about interventions to promote population health, one would expect to find discussions and debates in the health promotion literature about what constitutes a proper object for health promotion research and evaluation, and how to recognize health promotion programs. Unfortunately, I do not know of any serious discussion on the nature of health promotion programs, but this is not unique to the field of health promotion. Even in the more general evaluation literature, the reality of programs seems to be taken for granted, unquestioned, and never critically examined. Indeed, I had the unpleasant surprise several years ago, when I explored the literature on social program and evaluation in search of a definition for the concept of "program", to be unable to locate a critical discussion of the term. The best I could find was an old definition that described public health program as *a coordinated set of activities or services, organized within a particular time frame which aims to modify a problematic situation affecting a targeted segment of the population* (Potvin, Haddad & Frohlich, 2001).

While this definition has the merit of identifying a few parameters such as the "what" (objectives), "when" (time frame), "how" (services and activities) and "for whom" (target popula-

tion) of programs, it does not do much to help clarify its nature, such as the kind of "thing" it is. Finding a satisfactory answer to this ontological question is a prerequisite for developing an epistemology of program evaluation that would address the issue of how an evaluator, as a knowing subject, should approach programs as objects of knowledge. Although ontological and epistemological questions are difficult to address, and may lead to endless discussion, it is my contention that they are unavoidable for evaluators who wish to develop sound evaluations. This is especially so now, when health promotion is considered public health's third revolution (Breslow, 1999). As such, it is important to be able to identify clearly all the dimensions in which health promotion is transforming public health. This includes its practices, and the way it intervenes. Evaluators need to have a clear understanding of the nature of programs in order to be able to take into account their relationship with it and its context, and produce meaningful program-related knowledge. The aim of this comment is to offer a few leads for the examination of the ontological nature of health promotion programs.

Before addressing the question of the nature of programs, let's take a moment to justify this discussion by linking it to the epistemological question related to program evaluation. Epistemology is the examination of the conditions that make it possible for a subject to acquire knowledge about an object. When the WHO Working Group on Health Promotion Evaluation defined evaluation as *the systematic examination and assessment of features of a programme or other intervention in order to produce knowledge that different stakeholders can use for a variety of purposes* (Rootman *et al*., 2001), they make it explicit that evaluation is about producing knowledge about a specific class of objects, that of "programs" or "interventions". There is a general confusion in the health promotion literature about the notions of programs, interventions, initiatives, projects and probably some other forms of planned interventions (Levesque *et al*., 2000). These terms are most often used interchangeably. Discussing possible distinctions between those terms is outside the scope of this paper. For the remaining of the discussion, I will use the generic term "program" to encompass all those "organised actions" that form the main practice of health promotion and, consequently, the "object" of health promotion program evaluation. Thus, in

its broadest meaning, the evaluator's task is to preside in the production of this knowledge. It is my impression that many evaluators undertake this task simply as a methodological exercise, and apply the methods of the day which is currently a "mixed-methods" approach. The limitation of this approach is that it is unclear what it means, or how the final methodological cocktail is brewed.

This recipe was rooted in a lively epistemological debate in the evaluation literature about how one know about a program. I am glad to report that this debate has permeated the health promotion evaluation literature, especially in the dispute pertaining to the nature of evidence (McQueen, 2001; 2002; Rytchetnik *et al.*, 2002). It is my contention however that, in order to illuminate these epistemological debates regarding the relationship that should be established between an evaluator and a program, one must first examine the nature of programs as objects of knowledge.

Empirical realism, subjectivism, and the nature of programs

The ontological question about the nature of reality is probably the most difficult issue one can confront in part because, as the philosopher Roy Bhaskar explains, it can only be given philosophical or metaphysical answers. Indeed, one cannot empirically demonstrate the truthfulness of beliefs against criteria that lies totally outside of the human perception since all knowledge of reality is essentially derived from human perceptions (Bhaskar, 1978). Two principal philosophical traditions are in opposition about the ontological question.

Empirical realism as defined by Hume contends that there exists an objective reality that lies totally outside human awareness of it, and that cognitive experience such as human perceptions are true representations of the real world. Bhaskar characterises such ontology as flat given that knowledge of these objects, which can be acquired either through direct or mediated experience is conflated with the reality of the object itself. It is from this conflation that science gains its power to be the ultimate authority concerning empirical facts, whereby knowledge is in the object, and the role of the knower is to "discover" its properties (Latour, 1991). In this perspective, facts are facts, they speak for themselves; and scientists are only

passive and neutral intermediaries between nature and the world of humans (Latour, 1999).

Empirical realist ontology equates programs to their "objective components" and to the manipulations of these components as guided by program procedures. They exist in a series of structures that can be manipulated by an external agent, and that are deliberately activated to produce intended effects. In this conception, the logic model, and the links that it proposes between various structural elements through program activities are viewed as true representations of what happens in a program. It allows program planners and evaluators to assert that elements of a "logic model" (structures and activities) can be effectively standardized and evaluated. As such, what is "real" in a program can be limited to: 1) the objectively defined *problem* and its causes which can exist independently of people's awareness of them; 2) the rational *solution* that is identified by the application of scientific knowledge; and 3) the program's *procedures* that manipulate the natural objects that cause the problem. Programs are treated as if they had a "life" of themselves, independently of the social actors that interact with them. In this worldview, programs constitute a kind of repair shop for a failing nature.

The empirical realist conception of program is illustrated in figure 1. Note the absence of mediation between the objective reality and the knowing subject, the location of the problem and the program as an "objective" fact. There is no room for representation, negotiation nor political processes, since scientific knowledge authoritatively define the reality of both the problem and the program. The role of humans involved in the program is objectified and determined by their relationship with program elements. Finally, because programs are entirely circumscribed within the objective scientific reality, they are striped of their normative dimension. There is a strong tradition in public health and epidemiology to conceive of programs in a way that is congruent with empirical realism.

The other traditional ontology is idealism. In a nutshell, this ontological perspective states that reality is contingent upon the characteristics of knowing subjects, especially their pre-existing models and theories about reality. From an idealist perspective, scientific activity is about models and representations. As objects of knowledge these models (and theories) are entirely dependent upon humans and human

characteristics. Models are the products of an creative knower. An extreme form of this worldview, relativism, also conflates models and the objects they are about, suggesting that reality does not exist independently of knowing subjects. Thus, the world as we know it is totally constructed, and since there is no true "outside" criteria to validate them, all models are essentially of equal value. More often, however, idealism proposes a stratified reality composed of two layers. One layer is made of real objects that are independent of human perceptions of them, and the second layer is composed of models that knowing subjects develop about them. The criteria for attributing values to the various models are most often pragmatic, referring to their usefulness and capacity to inform human action.

This ontology can also be translated into program conception. In this view, programs are mainly, if not entirely, ideal constructions elaborated by social actors as reflections of their views of reality. This provides the framework for the construction of what constitutes the problematic situation. As shown in figure 2, in this view, the reality of both the *problem* and the *program* lies within the *models* that each of the concerned actors constructs about the world. The links with natural objects are putative and not necessary for programs to operate. Any effect a program might have is entirely mediated by the actors' representations. Therefore, programs are viewed as *negotiated consensus* between *relevant actors*. This view of programs is mainly promoted by constructivist evaluators such as Guba & Lincoln (1989) in what they called "4th generation evaluation", and by most advocates of participatory types of evaluation. In all cases however, problematic situations, and the programs designed to alleviate them, lie entirely in the world of human constructions.

Because health promotion programs clearly operate in the social realm it may seem, at first glance, that they cannot accommodate an empirical realist ontology. Until recently, there was a strong tendency in public health to discard the social aspects of public health program in order to concentrate uniquely on the biological mechanism that programs aimed to modify. In health promotion programs however the social nature of programs has always been acknowledge. Society and social phenomena cannot be conceptualised outside of human action. Indeed, the fundamental differences between an empirical realist and an idealist ontology have

often been used as essential distinctions between natural and social sciences. The line of rupture is that in the realm of "nature", things exist independently of the knowledge and action of humans whereas the social world and all its content is the product of human activity. One solution to this problem has been for structural sociologists, like Durkheim and his followers, to postulate the existence of a social structure that is antecedent to, and determine, human action. Although such a social structure results from human activity, in the original structuralist view, the social structure is assigned the same type of reality as natural objects. Objective knowledge of social reality is made possible because the effect of the social structure on human action is conceived as independent to the actors' knowledge of it.

My own impression is that most of the time, health promotion programs are conceived of as objective solutions to real problems as defined by epidemiological studies. Furthermore, it is very rarely that, as health promoters, we entertain a critical perspective on the relative role that our models and knowledge of reality can, and do play in program planning, implementation, and evaluation. This may be one reason why we have so many problems reconciling our ideal for public participation in program planning and implementation which entails encouraging active roles for social actors on one hand, and the "reality" of program and program management on the other. If introducing this critical space means accepting a totally relativist conception of programs, then one could legitimately question any pretence of health promotion at orienting social change. We would have to drop the idea of social programs altogether. This is however throwing the baby out with the bath water. There are ways of introducing a critical role of models and values in our conceptions of programs without losing sight of the "reality".

This discomfort with these two traditional ontological positions is echoed in mainstream science. Critical problems have been found with both empirical realist and idealist ontology. As for empirical realism, 30 years of research in sociology and anthropology of science have shown that scientists are not passive observers of nature. The real world and the knowledge that we have of it form two distinct levels of reality. It is only through their purposeful experimentations and mediated observations, both based on previous knowledge, models, and rep-

resentations, that scientists can derive new knowledge. It takes knowledge to produce knowledge, and scientific activity consists in actively elaborating and testing models of real objects. Campbell and those post-positivists who follow his evaluation tradition are well aware of the contingency of knowledge and the social nature of the scientific activity (Campbell, 1984). Conversely, the main critique addressed to idealism, is that as a result of the absence of "true" links between reality and our models of it, all knowledge is local and contingent, making generalizations across situations impossible. What is learned from one situation does not apply to a different one so that action cannot be founded on general knowledge, thus questioning the whole idea of programs' capacity to orient social change. There is an ontological gridlock about social programs that neither realism nor subjectivism can solve.

Critical realism and the ontology of programs

Originating in the work of the British philosopher Roy Bhaskar, critical realism proposes that the solution to this ontological quandary lies in a layered ontology. Whereas empirical realism assumes a flat ontology and subjectivism a doubled-layered reality, critical realism proposes a three-layered ontology. *Critical realism distinguishes not only between the world and our experience of it, but between the real, the actual and the empirical… The real is whatever exists, be it natural or social, regardless of whether it is an empirical object for us and whether we happen to have an adequate understanding of its nature. Secondly, the real is the realm of objects, their structures and powers. Whether they be physical, like minerals, or social, like bureaucracies, they have certain structures and causal powers, that is, capacities to behave in particular ways and causal liabilities or passive powers, that is, specific susceptibilities to certain kinds of change…* (Sayer, 2000).

Thus, in a critical realist ontology there is no ontological rupture between the physical and social realms. Both are fundamentally composed of structures and mechanisms that have the capacity to induce changes in other structures, independent of people's knowledge of it. It is these structures and mechanisms that form the intransitive objects of science, which is the layer of reality that science intends to explain

but whose behaviour and causal power is independent to the knowledge humans have of them.

Whereas the real in this definition refers to structures and powers of objects, the actual *refers to what happens when those powers are activated, to what they do and what eventuates when they do, such as when the bureaucracy's powers are activated and it engages in activities such as classifying and invoicing… The* empirical *is defined as the domain of experience, and insofar as it refers successfully, it can do so with respect to either the real or the actual* (Sayer, 2000).

So for critical realists, the world and the knowledge that we have of it are two distinct levels of reality, the former however is only knowable through human action that produces the conditions for the "real" structures and mechanisms to be observable through the "events" that results from their causal power. These events form the ontological layer that critical realists call the "actual". So the events that are encompassed in the actual are the meeting points between the models created by active knowing subjects, and real mechanisms. Finally the empirical layer is formed by the experience humans have of their world, and it is only through models and representations that events can be elaborated and reality apprehended through theories and models (Bhaskar, 1978).

In terms of program, the critical realist proposition of a three-layer ontology can be illustrated as in figure 3. Both located in the actual layer, problems and programs are events that suppose an interaction between an active knowing subject and causal mechanisms that are independent of the subject. It is only through models and theories that the subject can assign meaning to problems which can, or should be addressed by health promotion programs. Diabetes is a good example. Although known to the medical profession since antiquity as a specific dysfunction of the fat and sugar metabolism, it is only through models developed by chronic disease epidemiology about its association with cardio-vascular disease and reduced life expectancy that it has been given the meaning of a public problem in the beginning of the 1980's (Rock, 2002). As answers to such problematic events, programs are also located in the actual. To exist, they also require actions of a knowing subject who, through models and theories of how reality works, manipulates the conditions for mechanism to exercise their

causal powers. In this respect, programs do not fix failing natural objects. Their action can be conceptualized as providing conditions for other mechanisms to interact with those that produce the events viewed as problematic. This ontology essentially leads to conceiving programs as human *actions* on the *conditions* for the actualization of real and existing structures and mechanisms, whose existence and capacities, however, can only be apprehended through models and theories.

Conclusion

In this essay I argued that the implicit conceptualization of most public health and health promotion programs is one that gives them the same type of objective reality as natural objects that cause the problems they are designed to solve. I also contended that this is a misleading conception. Furthermore, I also claimed that the alternative idealist conception of programs that confines the reality of programs and problems in models and representations leads to some kind of post modernist pessimism that social changes cannot be intended.

I propose that Bhaskar's critical realist ontology provides an interesting alternative for conceiving programs. One of the advantage of a critical realist conception of programs is that it situates programs in the realm of the actual, the one that necessitates human action. Programs are thus a praxis by which humans transform their world through their work on the conditions that allow social and/or natural mechanisms to actualize their causal power. Like any praxis, programs suppose the use of knowledge and the labour of humans upon their environment. If this is so, then as object of knowledge, programs are practices, and the work of evaluators is to study practices.

This indeed, opens up a whole new world for thinking about the epistemology and methodology of program evaluation. While Pawson and Tilley (1997) in their *Realistic evaluation* have discussed evaluation methodology from a critical realist perspective, their epistemological perspective is not fully elaborated. It is thus imperative to develop a critical realist epistemology of program evaluation. Such an epistemology should flesh out the identity and the social role of the knowing subject as well as the nature of his or her relationship with the program. Most importantly, such an epistemological discussion should address the type of relationship that can be established between a program and a problematic situation.

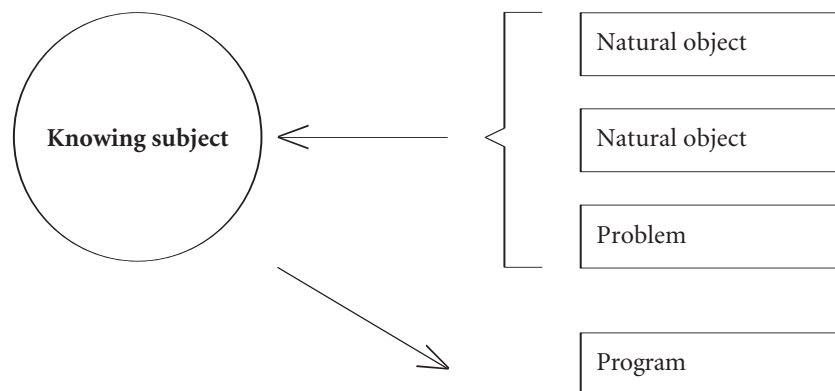**Figure 1**
Program as objective reality.
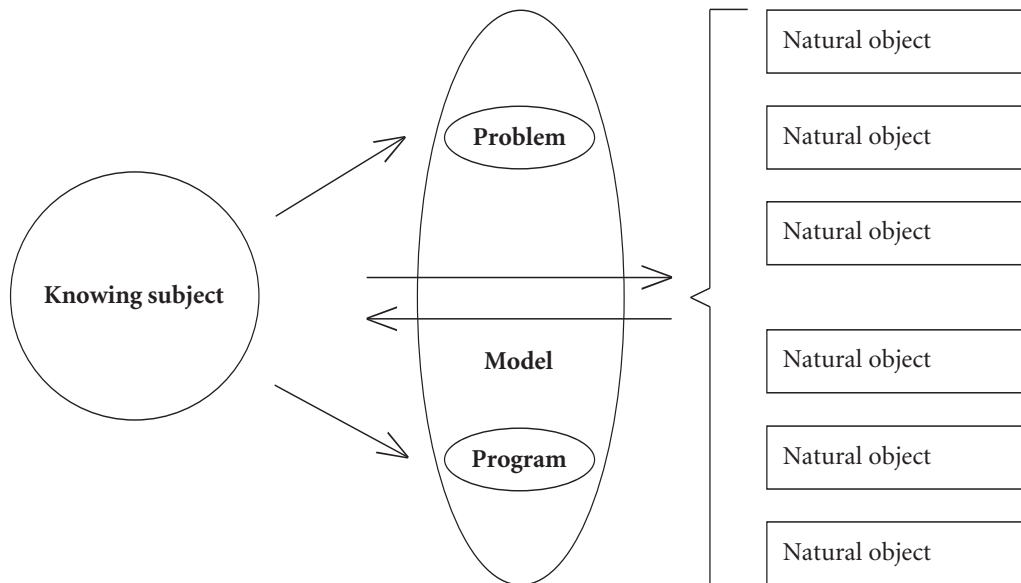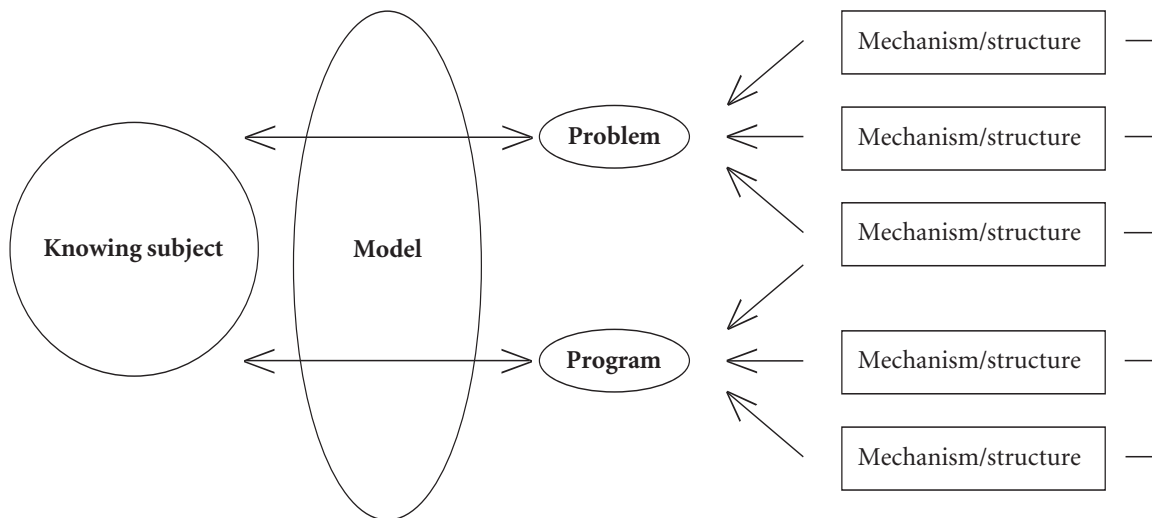
Figure 2
Programs as representations.

Figure 3
Program as action.

Acknowledgement

References

Bhaskar R 1978. *A realist theory of science.* Harvester Wheatsheaf, London UK.

Breslow L 1999. From disease prevention to health pro-motion. *JAMA* 281:1030-1033.

Campbell DT 1984. Can we be scientific in applied social sciences?, pp. 26-48. In R. F Connors *et al.* (eds.). *Eval-uation studies annual review.* Sage, Thousand Oaks CA.

Guba EG & Lincoln YS 1989. *Fourth generation evalua-tion.* Sage, Newbury Park CA.

Latour B 1991. *Nous n'avons jamais été modernes.* La dé-couverte, Paris.

Latour B 1999. *Politiques de la nature. Comment faire en-trer les sciences en démocratie.* La Découverte, Paris.

Levesque L *et al.* 2000. Vers une description et une évalua-tion du caractère écologique des interventions en promotion de la santé: le cas du Programme de la Carélie du nord. *Rupture, Revue Transdisciplinaire en Santé* 7:114-129.

McQueen DV 2001. Strengthening the evidence base for health promotion. *Health Promotion International* 11:261-268.

McQueen DV 2002. The evidence debate. *Journal of Epi-demiology and Community Health* 56:83-84.

McQueen DV & Anderson L 2001. What counts as evi-dence: issues and debates, pp. 63-81. In I Rootman *et al.* (eds.). *Evaluation in health promotion. Principles and perspectives* WHO regional publications, Copen-hague. European series; No 92.

Pawson R & Tilley N 1997. *Realistic evaluation.* Sage, Lon-don.

Potvin L, Haddad S & Frohlich KL 2001. Beyond process and outcome evaluation: a comprehensive approach for evaluating health promotion programmes, pp. 45-62. In I Rootman *et al.* (eds.). *Evaluation in health promotion. Principles and perspectives.* WHO regional publications. Copenhague. European series; No 92.

Rock M 2002. *Sweet blood and power: Making diabetics count.* PhD thesis. Department of Anthropology, McGill University, Montreal.

Rootman I, Goodstadt M, Potvin L, & Springett J 2001. A framework for health promotion evaluation, pp. 7-38. In I Rootman *et al.* (eds.). *Evaluation in health promotion. Principles and perspectives.* WHO regional publications, Copenhague. European series; No 92.

Rychetnik L, Frommer M, Hawe P & Shiell A 2002. Crite-ria for evaluating evidence on public health interven-tions. *Journal of Epidemiology & Community Health* 56:119-127.

Sayer A 2000. *Realism and Social Science.* Sage, London, UK.