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Clarifying the theory-based evaluation

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Abstract

T*he theory-based evaluation is one of the most used directions in evaluation, having the capacity to identify the program elements and their coherence. Beyond its variations, the applicability of theory-based evaluation renders it to remain attractive for specialists due to its approach perspectives and its solid conceptual construction; this direction is kept as a nucleus of program evaluation perspectives, incorporating new theoretical directions and experimental or quasi-experimental practices.*

Keywords: theory-based evaluation; implicit knowledge; logic model; program microtheory; program macrotheory; stakeholders; experimental design.

Introduction

The logic model of the program used in evaluation is viewed as an integration frame of various methods of data collection and interpretation, as integrated form of carrying out the methodological triangulation, of sources and evaluator, of construction the quantitative samples (Cojocaru, 2007b) or qualitative ones (Cojocaru, 2007a). In order to carry out the theory-based evaluation, putting into connection of three essential elements is necessary: the program, the objectives and the intervention process (Schuman, apud. Rogers, Petrosino, Huebner and Hacsi, 2000, p. 6). This evaluation type is based on the causal model of in-

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tervention employing the evaluator in checking the hypotheses depending on evidences. Chen considers that the theory, as an inter-connected proposition set having the capacity to explain and operate predictions regarding a phenomenon, is *descriptive*, and this type of theory „always dominated the social sciences and has a considerable influence on program evaluation" (1990b, p. 7). The author recommends the necessity of incorporation in program evaluation and of *prescriptive theories* (as the rational decision-making model) suggesting what to be done to make things better considering this theory dimension: action direction, intervention design conceptualization and its implementation, as well as criteria selection for setting the final results (Chen, 1990b, p. 8).

Program theory in evaluation

The program theory is useful because „it guides evaluation by identifying the key elements of the program, clarifying how these elements are planned in order to be connected to each other" (Cooksy, Gill and Kelly, 2001, p. 119). Fitz-Gibbon and Lyons Morris consider that „a theory-based evaluation of a program is one in which the selection of program features to evaluate is determined by an explicit conceptualization of the program in terms of a theory, a theory which attempts to explain how the program produces the desired effects" (1996, p. 177). The evaluators, appealing to program theory, construct the data acquisition protocol starting from the theoretical frame integrating the data, use „theoretical assumptions underlying an intervention in terms of a phased sequence of causes and effects" (Carvalho and White, 2004, p.143); thus, the operationalization of concepts satisfying the requirement of construct validity represents a frame of data acquisition and their interpretation, the data can be collected by various techniques or from various sources, following that „the model of the relations identified in the acquired data to be compared with the model of relations articulated in the program theory" (Cooksy et al, 2001, p.119). Stake (1967) presents an evaluation model relating to what is to be carried out at the expressed and intended objectives level, immediate results and activities, as well as the results at the level of users. The use of program theory presents the advantage of offering information that could lead to additional explanations regarding the problem, the solutions and the alternate actions to be carried out in order to obtain the intended results: „program theory, that is those concepts that are used to explain how a program or its implementation will work, plays an important role in decision making, since it can be used to both expand conceptions of problems and solutions and to narrow attention on a manageable set of action alternatives" (McClintock, 1987, p. 43).

A model is presented by Stufflebeam (1983, pp. 117-141) and retook by Cooksy, Gill and Kelly (2001), named CIPP (*Contexts-Inputs-Processes-Products*) model offering ways of analyzing the results starting from the organizing

and running conditions of the program; this model connects the contexts in which the evaluated program runs, the resources made available for its implementation, activities carried out and the results reflected in the report of the users. This approach perspective of evaluation using the logical frame model is considered by Stufflebeam as „typical procedure of theory-based evaluation" (2001, p. 38). Chen and Rossi (1983, pp. 283-302) give up to the model of evaluation based on methods and state that *the theory-driven evaluation* is more efficacious than *methods-driven evaluation* because this can identify the program potential reflected in the possible intended results at the level of the user. Chen considers than *the methods-driven evaluation* represented a development stage of evaluation practice by simplifying the complex aspects of this process and constructed the premises of elaborating some theories used in program evaluation (Chen, 1994b, pp. 229-230).

Approaches of program theory

Stufflebeam considers that there are only two ways of approaching in evaluating the program (2001, pp.37-39: 1) the approach starting from a validated theory and 2) the approach starting from the data collected in the program context and generates a theory that takes into consideration these data. Patton also adds a perspective, considering that there are three main direction of approaching the evaluation program theories (2008, pp. 344-346): 1) *the deductive approach* starting from the dominant traditional theories of various disciplines in order to build models of relations between interventions and effects, resulting in focusing mainly on research to the prejudice of evaluation, as a testing form of the existing theories; 2) *the inductive approach* implies the evaluator in field work in order to generated the program theory, to derive the theoretical models of the relations between program activities and results, considering the contextual factors; 3) *the user-focused approach* where the evaluator's aim is to facilitate relevant information procurement by involving the users, the personnel involved in the program in order to generated the program theory. For each of these approaches, Patton identifies some advantages (2008, p. 346): 1) *the deductive approach* claims a high degree of *credibility* sustained by using the specialty literature theories and using the existing knowledge, by connecting the theories in a wider vision; 2) *the inductive approach* enjoys a high degree of *relevance* as the theory is a result of researching an existing program by measuring some noticeable indicators and is generated starting from the empirical data collected during evaluation; 3) *the user-focused approach* has a series of advantages generated by the fact that the users understand the action theory and are the participants in elaborating this theory. Regarding the disadvantages of each approach type, the author considers that (Patton, 2008, p. 346): 1) *the deductive approach* implies time and resources for documentation, for studying the specialty literature, and

the used theories can not be relevant for the evaluated program, and the practitioners are rather reserved to the perspectives of the academic theories; 2) *the inductive approach* implies a high consumption of time and resources for the factual documentation, in the field, and the key informers of the program have different interpretation perspectives, and operate with various theories; 3) *the user-focused approach* presents a major risk of the fact that the theory can not reflect the program realities, and the competition between participants can lead to a inadequate theory. Patton (2008, pp. 347-349) is a promoter and supporter of the *utilization-focused evaluation* based on the third type approach and, for which, it operates a series of recommendations in order to strengthen this evaluation model that we intended to present in the subchapter dedicated to this type of evaluation.

Normative theory and causal theory in evaluation

Chen resumes the argumentation on *theory-driven evaluation,* considered to be *action-oriented* (1994b, p. 230)*,* and stating that there are two forms (1990a): *normative and causal.* The *normative* one refers to the comparison between program theory elements, viewed also as standard and what is obtained in running the program in order to identify the contradictions, and the *causal* one approaches the causality relations that underline the program, setting in deterministic type relations their actions and effects as program impact. Within the normative evaluation, Chen identifies three models (1990b, pp. 13-14): a) *the normative evaluation of the treatment* (identifies the normative structure of the intervention, examines the current treatment given and estimates the congruence between implemented norms and interventions; b) *The normative evaluation of the implementation environment* identifies the implementation norms of the program within the environment, examines the current environment in which the program is implemented and estimates the congruence between the normative and implementation aspects within the running environment of the program and c) *the normative evaluation of the results* aiming to identify the normative objective or result set that are followed within the program and activity analysis following the provisions of their objectives. In order to clarify the evaluation causal theory, Chen suggests three specific types of this theory (1990b, pp. 14-15): a) *impact evaluation* aiming to measure the intervention impact both at the level of the expected results and at the level of the perverse effects; b) *intervention mechanism evaluation* measuring and analyzing the causal processes between interventions and results and c) *generalizing evaluation* aiming to observe the ways the evaluation results of a program can be extended in future program, in other locations or programs aimed to other target groups. From the point of view of the methodology used in evaluation, whether normative or causal, or under various combinations of the six types analyzed, Chen considers that „the theory-driven

evaluation can use any method helping to understand program functioning and operation" (1994a, p. 82).

Program micro and macrotheory

Following the same direction related to program evaluation starting from its theory, Weiss (1972, 1997) suggests the use of some diagrams to put into relation the expected and intended results and the carried out interventions and comes back to the theory-based model in 2000 (Birckmayer, Weiss, pp. 407-431). This perspective used by Weiss is focused on *program microtheory.* In order to clarify various theoretical approach levels of programs, Shadish divides the program theory in: „1) *Program microtheory* describes the structural and operational characteristics of what is being evaluated in enough detail to provide information on the general nature of the project or program, its functioning, and its changeable component parts; 2) *Program macrotheory* details the social, psychological, po-litical, organizational, and economic factors that facilitate or constrain change within and outside programs" (Shadish, 1987, p. 93). The author considers that, generally, the program macrotheory oriented to social change is ignored in eva-luation, the emphasis being on the particular aspects describing the evaluated programs. From this point of view, the macrotheory ignoring in evaluation repre-sents the weak point in identifying the new ways of social change, both within the program and within the environment it operates; the evaluators can participate, by the way of evaluating some particular programs, in changing the social system by recommendations regarding multiplication and replication of evaluated inter-vention models. The implicit differences of the way how micro and macrotheories of the program are applied are presented in the financier requests in elaborating the program objectives; in all the guides of financing proposals, objectives on long term are requested (referring to the target population and to the social change) and also the short term objectives (referring to the changing of target groups situation). Often, in the evaluation process, the long term objectives are ignored due to not using the macrotheory in program evaluation, the evaluators being focused mainly on the immediate results of the interventions carried out within the program; „some evaluators have unwittingly sacrificed the social significance of their work to the shibboleth of short-term use" (Cook and Shadish, apud. Shadish, 1987, p. 102). An important aspect is using this type of evaluation is represented by *theory selection* that can explain the program, and Weiss considers that when the evaluator should select a theory or a theory set, he has to take into account the following criteria (2000, pp. 39-41): 1) the beliefs of people involved in the program, of those that worked out the project and the ones that are im-plement it; 2) plausibility, in the way that the selected theory or theories explain what is happening within the project and the evaluation participants can offer

necessary information for their checking; 3) lack of knowledge in the field covered by the program; 4) theory centrality in program explaining, e.g. the selection of the most appropriate theory of the running program.

Program failure versus theory failure

Some authors (Suchman, 1967; Weiss, 1972; Bickman, 1987; Rogers et al., 2000) operate differences between program failure and the program theory failure. Within evaluation, the results identification failure can be generated by: a) application of wrong theories in evaluation or manifestation of some defaults in providing the theory validity, b) the evaluated program was not correctly implemented and c) working out an evaluation design, measuring and statistic analysis that do not lead to finding out the program effects on users (Bickman, 1987, pp. 10-11). When we are talking about an inadequate theory, we are referring both to program micro and macrotheories (Shadish, 1987, pp. 93-94); in this way, the conceptual system of the used theory does not retrieve the indicators in program objectives and actions, and the program description according to the used theory uses a language that is not congruent with the practice carried out within the program. When the program was not correctly implemented, even though the used theory is adequate, the evaluation points out dysfunctional aspects between the carried out actions and the set objectives; in other words, the evaluated actions do not lead to intended objectives, and the evaluation has a formative character, in the way of proposing some action directions to improve the conditions in carrying out the expected effects of the program (Cojocaru, 2008). Carrying out the evaluation design, concept operationalization and setting some inadequate indicators can create errors in evaluation that are amplified by the poor capacity of the evaluator to measure and analyze the data (under question by the implementers, mostly when analysis statistical procedures are used that do not point out fine modifications of attitudes and behaviors of users). In this case, the errors of evaluation are generated by the fact that theory concept operationalization, measuring of indicators or data analysis do not provide the conditions for checking the theory (Bickman, 1987, pp. 11-12), mostly in the case of some subtle modifications of the users' situation. In this respect, in order to reduce this type of error, it is necessary to put into a causality relation of the interventions with the expected results by conceptual operationalization both of interventions and of objectives. That is the reason why, in order to provide the theory validity, in evaluation, the optimal interventions producing intended effects are identified, measured and analyzed.

Implicit theory and key informers involvement in evaluation

Irrespective of the selected evaluation strategy, of the theories used of program evaluation, of the evaluation process design, the importance of key informers implication in the evaluation process is asserted; they can offer relevant information in order to describe and understand the program elements or components, the program functioning and perception pointing out on their interventions and effects on users. The explanations and descriptions of the key informers can be a knowledge resource in drawing *the implicit theories*, noticed and analyzed by the evaluator, used by him in program analysis; „the majority of intervention programs that operate in a community have not been designed by scientists but rather by stakeholders such as program designers, program directors, and program staff. Each of these individuals perceives the nature of the problem in an individual way and develops a personal preference for a particular solution to problems confronted" (Chen, 2005, 40-41). For example, the measuring of youth attitudes and behaviors towards avoiding drug consumption as results of a drug consumption risk reduction program among them identifies explanations of the key informers regarding these results, articulated by the evaluators in a theoretical construct; the key informers explain the fact that reducing the risk of drug consumption is generated by knowing these risks by the users, the ways of youth involvement in activities organized within groups of equals., the influence of discourse and the metaphors operated in the familial environment etc. All these conditions are analyzed by evaluators and are operationalized as implicit objectives that should be followed within the program; in this way, there are evaluated the educational activities the youth participate in, the activities within the group of equals and parents involvement in operating some certain definitions regarding drugs. The identification of implicit theories operating at the key informers level provides new directions in the evaluation process and offers the possibility of developing some new ways of interventions (for example, within the program, activities were not organized in which the users' parents were involved, but the pointing out the importance of their implication can lead to adopting and improving the program by organizing such kind of activities.

Program theory and implementation process theory

Scheirer (1987) makes the analytical distinction between program theory and implementation process theory, considering that both forms of theory are very useful in program evaluation because they offer different perspectives on program and its components, as well as on its functioning: „program theory should be used by evaluators to guide the development of measuring instruments to assess what program was delivered. The implementation process theory, in contrast, discusses

variables governing the delivery mechanism itself" (Scheirer, 1987, p. 60). The first type of theory is especially focusing on program components, on its content, on what precisely the program is and on factors participating to its running, exploiting the scientifically validated theories of certain domains: education, sociology, social assistance, economy, psychology etc; the evaluators use various theories in an integrated vision of program theory for the detailed description of its intentions, answering to the *what* type question? (Scheirer, 1987, p. 63). On the other hand, the implementation process theory aims to explain, in a coherent manner, the carried out interventions and the obtained intended or non-intended effects, the ways in which the services are offered, observance of the initial plans in activity succession and reference of explanations by using the cause-effect relations. In the case of using the implementation process theory for evaluation, „observable variations of the effects are recorded" (Scheirer, 1987, p. 68), considering as independent variables: implementing organization characteristics, the environment in which the program and the activities are run; all these are put into deterministic relation with implementation accuracy, considered to be a dependent variable (Scheirer, 1987, p. 68-69). Within implementation evaluation, the evaluators should answer the *how?* and *why?* type questions. In the definition Wholey operates with, we notice this distinction not explicitly specified between program theory and implementation process theory, even though, in the definition, this difference can be noticed: „a program theory identifies program resources, program activities, and intended program outcomes, and specifies a chain of causal assumptions linking program resources, activities, intermediate outcomes, and ultimate goals" (1987, p. 78); the first part of the definition focuses on program components, and in the second part they are connected with the implementation results. Weiss considers that both theory types (program theory and implementation theory) make what is called *the theory of change* (2000, p. 37).

The complementarity between program theory and experimental design

Even though, at first glance, using the program theory seems to be an experimental model, due to the study of causal chain between different program components, the identification of causes of the produced changes and the analysis of program effects, the theory-focused evaluation takes into account *only* their interventions and effects on the target group that is the program user. Cook considers that „the theory-based approach to evaluation is also *not* experimental or even quasi-experimental" (Cook, 2000, p. 28) because, within this type of evaluation, the programs effects are measured within a causal argumentation, using only the group participating in the intervention, without comparing the measuring of variability of some indicators with the resulted obtained within

some control groups. The author considers that „theory-based evaluation techniques are extremely useful when used together with experiments, rather than in apposition to them" (Cook, 2000, p. 29). In the case in which the evaluation does not also use control groups in comparative analysis of data, its conclusions can not offer counterfactual arguments, e.g. can not offer valid explanations referring to what might have happened if the target group would not participate in the program. That is the reason why, the program theory consolidation applied in evaluation can be carried out by applying an experimental or quasi-experimental model considered to be complementary and not an alternative to the program theory (Cook, 2000, p.34).

Conclusions

This article advocates the using of theory-based evaluation and proposes to clarify some themes related to this approach in evaluation. Refining the discourse regarding the theory-based evaluation implies taking into account of some essential aspects regarding the elements leading to the consolidation of this perspective as well as of the conceptual aspects incorporated in the theoretical corpus of this evaluation strategies. The presented theoretical arguments consolidate the program theory and extend its applicability area, taking into account new directions and approaches of the program. The distinctions between program theory and implementation process theory, between program micro- and macrotheory, between normative theory and causal theory, between theory failure and program failure are useful for clarifying some aspects related to the applicability of the theory-based evaluation.

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