



**MORAL DEVELOPMENT AND RATIONALITY IN ORGANIZATIONS:
ANALYZING THE DEFINING ISSUES TEST - 2**

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ABSTRACT

This article aims to analyze the methodology and application of the instrument Defining Issues Test - 2 (DIT-2), in research that articulates the Theory of Moral Development (TDM) with rationality in organizations. DIT-2 measures the moral judgment construct, an element of great relevance for decision making and for understanding the rationality of managers, entrepreneurs and employees in organizations. The researches selected for analysis articulate the theoretical-methodological framework of DIT-2 with that of rationality, in Brazilian organizations. The analysis addresses theoretical assumptions, characteristics of DIT-2, procedures for application, data collection and analysis, results achieved and contributions of each research. The results indicate that instrumental and substantive rationality are associated with moral judgments. The use of DIT-2 presented, however, limitations in the application due to collection procedures and to determine the results. Future research may apply this framework to statistically significant samples.

KEY WORDS: Moral Development, Rationality, Guerreiro Ramos, moral judgment, Defining Issues Test - 2.

INTRODUCTION

Since the publication in 1981 of the work *A Nova Ciência das Organizações*, researchers have been discussing instrumental and substantive rationality based on the theoretical framework described by sociologist Alberto Guerreiro Ramos (1915-1982). Its production presents concepts such as the 'sociological reduction' (RAMOS, 1996) and the 'substantive theory of associated human life' (RAMOS, 1989). Both are articulated in the argument of

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Ramos (1989) in favor of a science of organizations that is trustworthy to reality and that considers reason as an exclusive attribute of the human psyche. Ramos (1989) then defines substantive rationality based on values and distinguishes it from instrumental rationality, based on the utilitarian calculation of consequences.

Based on this framework, Serva (1996) empirically investigated rationality in administrative practice, finding elements of instrumental and substantive rationality. After almost 25 years, the theoretical model and the categories proposed by Serva (1996; 1997) were applied in studies on public and private organizations. According to the reviews of Brazilian literature by Santos (2012) and Serva et al. (2015), a first generation of studies sought to identify rationality in organizations. A second generation deepened the elements related to substantive rationality within management, such as decision-making processes (SILVA, 2011), reflection and communication (CAITANO, 2010) and tension (SANTOS, 2012; SIQUEIRA; SERVA, 2014).

The review by Costa et al. (2017) of production between the years 2013 and 2016, finds studies on the theory of rationality and the historical context of Guerreiro Ramos' work. Other research still suggests aspects such as intuition (ANDRIOTTI et al., 2014), phronésis - practical wisdom or prudence - as a methodological approach (CAITANO, 2017) and lucid reason, constituted by the unity between prudence and intentions (SANTOS et al., 2019).

Some of these new elements associated with rationality, and which this article will address, are moral development and the resolution of moral dilemmas. The articulation between the theoretical and methodological framework of the Theory of Moral Development (TDM), coming from Psychology, with the substantive and instrumental rationality, highlights the moral judgment. In Serva's model (1996; 1997), ethical judgment is associated with substantive rationality. Moral dilemmas, in turn, express a state of tension, for which the organizational actors ponder between the ethics of responsibility and conviction, discussions present in the work of Weber (1999) and Ramos (1983, 1989).

Cherques et al. (2011) studied moral development in a group of Brazilian and Portuguese organizations, finding evidence of a pre-conventional and conventional moral development in the former. But, until then, Brazilian studies have not linked TDM to rationality in organizations.

In 2015, two works were completed that made this theoretical-methodological articulation. In the first, Ames (2015) sought to understand how economic and social entrepreneurs dealt with their moral dilemmas, considering rationality, moral development and moral uncertainty. In the second, Costa (2015) studied the case of the Association of Alcoholics

Anonymous, aiming to understand how organizational practices and social interactions could contribute to the moral development of its members. These surveys aggregated the main categories of analysis of TDM and neo-Kohlbergian studies. Both used the moral development test - Defining Issues Test 2 (DIT-2) - to observe the participants' moral reasoning scheme. This instrument is the result of the work of the neo-Kohlbergian approach, research conducted by Rest et al. (1999a, 1999b). The criteria for choosing this instrument are considered in section 3, on Methods and Procedures.

The objective of this article, therefore, is to evaluate the application of the DIT-2 instrument in research that links moral development to rationality in Brazilian organizations. For this, methodological procedures, analysis and interpretation of results are discussed, as well as limitations in their operation.

This article is organized as follows. First, we approach rationality in organizations according to Ramos (1989), and Kohlberg's theory of moral development (1992), including the neo-Kohlbergian perspective. This first stage refers to the theoretical context, necessary to understand the applicability of the instrument. In the second stage, the DIT-2 instrument and methodological procedures are discussed. Then, the use of the instrument in organizational studies in the Brazilian context is analyzed, considering the results obtained, limitations and difficulties in its application and discussing its adoption in the field of administration. Finally, there is a reflection on the adoption of this instrument in research that addresses rationality and moral development in organizations and implications for future research.

THEORETICAL FOUNDATION

Considering the theoretical context in which the research was built for the use of DIT-2, this topic will briefly present Alberto Guerreiro Ramos' conceptions about instrumental rationality and substantive rationality, and then the central concepts of Lawrence Kohlberg's work and the neo-kohlbergian approach.

Rationality in organizations according to Alberto Guerreiro Ramos

In the Brazilian scenario, Ramos' "substantive approach to organization" (1989) has been shown as an alternative for the reaffirmation of ethics in organizational studies. In the work, Ramos presents the fundamentals of his Substantive Theory of Associated Human Life, in which he reconsiders reason as an attribute of the human person, and discusses the full form of rationality, that is, not only instrumental, but substantive rationality.

There are, then, two pairs of basic concepts: instrumental rationality and substantive rationality and, of Weberian inspiration, the ethics of responsibility and ethics of conviction. Ramos (1989) was supported by Weber's definitions (1999), on functional and substantial rationality and the ethics of responsibility and conviction. According to Siqueira and Serva (2014), Ramos (1989) did not systematically define the main terms of his theory, since his purpose was to lay the groundwork, allowing only to aggregate the classic terms.

According to Ramos (1989, p. 16), “rationality, in the substantive sense, can never be a definitive attribute of society, as it is directly undertaken by human conscience, not by social mediation”. Substantive rationality "pushes the individual towards a continuous, responsible and painful effort to dominate his passions and his lower inclinations" (RAMOS, 1989, p. 16). It refers to the ordered and evaluative thinking of actions, that is, based on ethical values.

Instrumental rationality is the result of a process of overvaluation of reason, which was removed from the scope of the human psyche and replaced as an external attribute, of the social environment, giving it sociomorphic characteristics. It corresponds to a view of human reason based only on the utilitarian calculation of consequences, in which human beings act according to an end or objective destined to serve their personal interests (Ramos, 1989).

Analyzing the role of the public man, Weber (1999; 2002) describes that the ethics of responsibility corresponds to the commitments and obligations that represent the position he occupies, the public interest he represents and the responsibility towards other actors. Corresponds to ethical requirements external to the actor. The ethics of conviction is based on the ethical principles of the actor himself, who, under the circumstances, considers the values he believes in, such as honesty, loyalty or trust.

For Ramos (1989), the existential tension poles are one of the constitutive elements of the human condition and reason implies being aware of this tension: “the good man, in turn, is never an entirely socialized being; rather, he is an actor under tension, giving in or resisting social stimuli, based on his ethical sense”(RAMOS, 1989, p. 52).

The human existential tension represents the effort for human self-control, of reason over passions (RAMOS, 1989). Santos (2012) analyzed the presence of tension in decision-making processes, in conflict situations, among other elements experienced by public managers.

Since Serva's model (1996; 1997) containing 11 organizational processes, the study of rationality was enriched with research that: applied the analysis framework, inserted new theories, carried over to a second generation (SERVA et al., 2015) and discussed the substantive theory and the historical context of Ramos' work (COSTA et al., 2017). Initially, organizations

of all types are approached, followed by an emphasis on specific sectors and finally, they focus on organizational processes.

The ethical judgment, present in Serva's model (1996), is related to substantive rationality and the processes of hierarchies and norms, values and objectives, decision making, reflection on the organization and conduct of conflicts. Similarly, moral judgment appears in TDM related to the conduct of moral dilemmas.

Lawrence Kohlberg's theory of moral development and the neo-Kohlbergian approach

Lawrence Kohlberg's theory of moral development (1927-1987) is an evolutionary cognitive-structural approach (KOHLBERG, 1992). Biaggio (2002) recalls that Freud and Piaget were the pioneers in the study of moral development in psychology. Haidt (2013) recognizes that Kohlberg's work represents a change in direction in the field, insofar as he did not adopt psychoanalysis or behaviorist assumptions.

Structural cognition assumes that moral judgments follow a structure or form of universal moral judgment, that is, valid for all people and cultures. Kohlberg (1992) started from Piaget's stages of development, marked by the passage from heteronomy, or morality external to the individual, to autonomy. Then he empirically identified that moral justifications in dilemmas followed a pattern of reasoning. This pattern revealed an ordered structure of six stages of moral development. The evolutionary nature corresponds to the gradual development from an initial stage to the most advanced stages of development.

The six stages of moral development described by Kohlberg (1992) are divided into three levels: the pre-conventional (stages 1 and 2), the conventional (stages 3 and 4) and the post-conventional (stages 5 and 6).

At the pre-conventional level, rules are considered external to the subject, without internalizing moral principles and action is judged by its consequences and not by intentions (KOHLBERG, 1992). The pre-conventional level consists of the stages: (1) Orientation to punishment and obedience: the morality of an act is defined in terms of physical consequences for the agent (concrete morality). If an action is punished, it means it is morally wrong; if not, the agent understands that the action is morally correct; (2) Relativistic instrumental hedonism: the morally correct action is defined in terms of pleasure or the satisfaction of needs, in a hedonistic stance. It is a selfish stage, in which morality is relativized according to the satisfaction of personal needs (KOHLBERG, 1992).

At the conventional level, it is assumed that the person identifies or accepts the rules of others, especially the authorities. The individual begins to internalize moral principles according to what he thinks is right in relation to society and the law. The conventional level is that of most adolescents and adults, according to research in the North American and Brazilian reality (BIAGGIO, 2002). It consists of the stages: (3) Morality of social approval and interpersonal relationships: the morally right behavior is what leads to the approval of others, conforming to the rules imposed by the groups to which it belongs; (4) Orientation to the law and order: the subjects have great respect for the authority, for fixed rules, for the law and for the maintenance of the social order established by the institutions (KOHLBERG, 1992).

The post-conventional level it consists of the highest stages of moral development and, generally, few adults reach them. According to Kohlberg (1992), it is based on general moral principles. These principles sometimes conflict with the rules of society and, in this case, are judged according to principles of conscience and not by convention. It consists of the stages: (5) Orientation to the social contract: the individual admits that laws or customs can be unfair and must be changed. Change is sought through legal channels and democratic contracts; (6) Universal principles of consciousness: at this stage, the individual recognizes the universal moral principles of individual consciousness and acts in accordance with them. Stage six represents a more universalistic moral orientation,

Kohlbergian theory received criticism regarding the universality of its development model, when it argues that the structure of reasoning is the same, regardless of culture. He was also asked about his perspective of moral development in well-defined stages, through which people move from “step to step” (REST et al., 1999a). Currently, neo-Kohlbergian studies conceive that moral reasoning has only a predominance at a certain level.

Another issue concerns the theory being developed, initially, from research with the male audience. Gilligan (1982), psychologist and Kohlberg's colleague (1992), raised the issue in defense of a perspective that considers female morality, with the ethics of care as its guiding principle. In Kohlberg's (1992) perspective, justice is the main moral orientation and, according to Rest et al. (1999a, 1999b), the DIT is equally valid for men and women.

Kohlberg's colleagues (1992) continued their perspective, proposing changes in some methods and theoretical assumptions. Rest et al. (1999a, 1999b) are frequent names in this perspective. Since then, neo-Kohlbergian studies have developed other tools for assessing moral judgment, validated over decades of research. Among them are the Defining Issues Test (DIT) and its second version, DIT-2, by Rest et al. (1999a, 1999b), and the Moral Judgment Test, developed by Lind (2000).

In Kohlberg's (1992) method, the interviewees answered about how they would solve the moral dilemmas told by the researcher. At DIT-2, participants answer a questionnaire composed of five moral dilemmas. According to Thoma and Dong (2014), DIT measures recognition and the importance given to questions based on moral principles.

Rest et al. (1999b) define moral judgment as a cognitive process, by which a person constructs basic epistemological categories, such as 'rights', 'duties', 'justice' and 'reciprocity' and in which judgment can develop over time, marking the passage from adolescence to adulthood by the evolution from the conventional to the post-conventional stage. With adherence to DIT, growth is understood as a gradual shift from a less complex concept of social and moral cooperation to a more complex one (THOMA; DONG, 2014). In addition, they prefer the definition of schemes, as in Table 1.

The conception of moral reasoning schemes is equivalent to Kohlberg's (1992) stages. According to Thoma and Dong (2014), the personal interest scheme corresponds to stages 2 and 3 and represents a lens based on individual interest and the gains and losses that are experienced in a given dilemma.

Table 1
From stages to moral development schemes

Level	Kohlberg internships (1992)	Schemes (REST et al., 1999a)
Pre-conventional	1. Heteronomous morality	
	2. Hedonistic morality	Personal interests
Conventional	3. Morality of social approval	(Stages 2 and 3 = S23)
	4. Orientation to law and order	Maintenance of standards (S4)
Post-conventional	5. Orientation to the social contract	Post-conventional (S56)
	6. Universal principles of consciousness	

Sources: Adapted from Kohlberg (1992) and Thoma and Dong (2014).

The scheme for maintaining norms, derives from the conception of stage 4. Prevalence in the judgment respects the rules and laws of a society. The post-conventional scheme is equivalent to stages 5 and 6. Thoma and Dong (2014) argue that in post-conventional thinking moral obligations must be based on criteria that emphasize shared ideals, completely reciprocal and open to scrutiny.

METHODS AND PROCEDURES

In the following topics, the methods and procedures that constituted the construction of the research, object of analysis of this article, will be presented. Such researches were found from the search in Capes' thesis and dissertation database (2016) in the Administration area, considering those that relate the theoretical-methodological framework of DIT-2, for moral judgment, with the concept of rationality in organizations, discussed by Guerreiro Ramos (1989). The search was carried out in February 2016, without time cuts, resulting in two surveys that relate the two theoretical frameworks.

Design of the study model: TDM and rationality in organizations

The researches selected for analysis link Kohlberg's TDM (1992) to Guerreiro Ramos' concepts of rationality (1989). This approach emphasizes the emphasis on human reason for judgment and action.

Two theoretical elements stand out as common points. The first of these is the individual interest based on the achievement of a certain purpose, in common between instrumental rationality (RAMOS, 1989) and the scheme of personal interests (REST et al. 1999a), as shown in Figure 1.

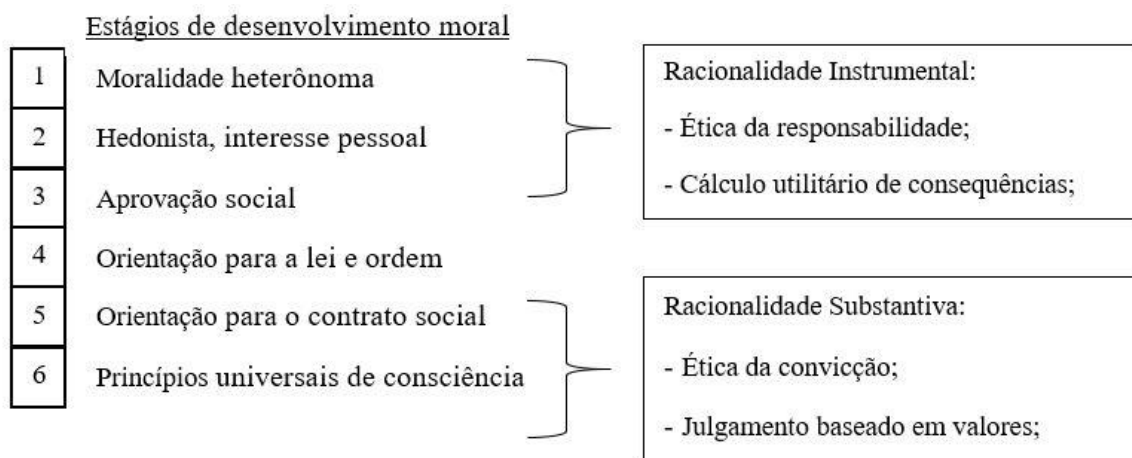


Figure 1: Stages of moral development and rationality in organizations

Source: prepared by the authors.

The second construct corresponds to ethical values or principles, associated with the definition of substantive rationality (RAMOS, 1989; SERVA, 1997) and the post-conventional moral development stages. Ethical principles are at the root of this form of rationality (RAMOS, 1989) and moral judgment (KOHLBERG, 1992). Substantive rationality as one that considers

the means and ends to be adequate in action, while Kohlberg (1992) considers justice as the central ethical orientation of his theory.

Approaching the moral reasoning of each stage of development, with the elements of instrumental and substantive rationality, we have the outline suggested in Figure 1.

This articulation presupposes a relationship between the initial stages of moral development and instrumental rationality. Likewise, a relationship between substantive rationality and the more advanced stages of moral development, mainly because both represent a judgment based on ethical principles.

With regard to tension, the possibility of being greater is assumed in actors who present a predominance of the moral judgment of the post-conventional scheme, that is, in stages 5 (orientation for the social contract) and 6 (universal principles of conscience).

Defining Issues Test-2 instrument and measures

The complexity of Kohlbergian clinical interviews led researchers to develop more objective methods, such as the Sociomoral Reflection Objective Measure (SRM), by the American John Gibbs, and the Moral Judgment Test, by the German Georg Lind (BATALIA et al., 2010; BIAGGIO, 2002; BIGGS; COLESANTE, 2015).

Rest et al. (1999a, 1999b) created the Defining Issues Test in 1979. The most recent version, called DIT-2, contains five dilemmas, each with 12 items with five-point scales, which are classified and ranked in degree of importance by the respondent (THOMA; DONG, 2014). The main indices calculated by DIT-2 are: N2, "I can't decide", "humanitarian liberalism" and "religious orthodoxy" (THOMA; DONG, 2014). The N2 index is higher when the respondent differentiates between responses between the personal and post-conventional scheme and decreases when the person does not differentiate between these items (THOMA; DONG, 2014).

An additional measure corresponds to the type of development. Thoma and Dong (2014) explain that when a person clearly has a preference for a reasoning scheme, he represents a 'consolidated' development. On the other hand, when the respondent considers the items representative of the three schemes, the development is of the 'in transition' type. Thoma (2008) suggests that the phases of moral development in consolidation or in transition can be a moderating measure of consistency between moral judgment and action.

The 'I can't decide' index reveals how many dilemmas the respondent was unable to decide for its protagonist. The 'humanitarian liberalism' index indicates how many dilemmas the participant has decided to take the action that prioritizes the person involved. The 'religious

orthodoxy' index corresponds to the answer to item 10, of the 'cancer dilemma', in which the respondent would consider as very important the argument that “only God could end a life” (THOMA; DONG, 2014).

Procedural Considerations for Using the Defining Issues Test - 2

For the use of DIT-2, methodological procedures and official requirements for authorizing its use are granted by the Center for the Study of Ethical Development (CSED), linked to the University of Alabama (USA). He holds the legal rights on the use of the DIT, centralizes the calculations of the instrument and authorizes the researchers to apply the test, after signing the “authorization term for using the Portuguese version”. These steps and the following were carried out in the research under analysis.

The CSED (2017) maintains on its official website the initial information to assist researchers, such as the form to be filled in to use the instrument. However, there is no mention of applying the test in other languages. For such consultation, it is necessary to contact via email. Upon request, CSED sent the Portuguese version of DIT-2 to Portuguese researchers via email.

There is a cost to perform the DIT-2 calculations. With the tests answered by the participants, the collected data must be transcribed to a spreadsheet and forwarded to the CSED. In possession of the information, the cost is charged in proportion to the total number of respondents and the working time, even in the case of tests invalidated by inconsistency, if it occurred in one of the works. The CSED advises that this spreadsheet is passed on to the researcher after the form is sent, indicating his interest in using the instrument. It is also requested to fill in the “authorization term for use of the Portuguese version”.

The survey of entrepreneurs applied the DIT-2 individually, for each of the six survey participants, which took 24 to 42 minutes to answer. The age range was 34 to 65 years. All were graduated and post-graduated, four with lato sensu post-graduation and two with master's degrees. The second survey applied the tests to 16 members of the Alcoholics Anonymous Group, but in groups of 2 or 3 subjects. The ages varied between 24 and 65 years, among the men and women in the sample, and educational levels ranged from elementary to higher education, with and without specialization. Both surveys followed a qualitative approach and adopted a non-probabilistic sample.

In addition to the data collected in DIT-2, some complementary data were necessary for the calculation of the instrument by CSED. Demographic data were requested: age, sex,

education level, political position, whether a US citizen or not and whether English is the first language. In addition, the time to complete the test per participant must be indicated. A new contact with the participants was necessary to know the political position of each one. However, the range of options offered by the center represented the American political position: very liberal, liberal, neither liberal nor conservative, conservative, very conservative. Thus, the responses referring to the Brazilian context could be interpreted according to the American scenario and represent a weakness for the use of the instrument.

Regarding political positioning, Rizzo and Swisher (2004) compared the results obtained with the DIT-2 and the Sociomoral Reflection Objective Measure (SROM) in research in public administration. They found that, in the American scenario, liberals and moderates have a higher index in the post-conventional scheme than conservatives in the DIT-2 test. For them, the results support previous research that pointed to a political dimension of the DIT. Thus, if we consider the difference in terms that designate the North American and Brazilian political position, we do not know to what extent it interferes with the results of moral development of Brazilians.

There are two other issues due to the centralization of the calculation of results by the CSED. The first refers to the impossibility for researchers to have access to the calculation procedures of the DIT-2 instrument. The second corresponds to the need to send data to CSED. Although it is not possible to identify respondents, the foreign research center will now have data on a large number of respondents. If the calculations were carried out by Brazilian researchers, it would be possible to conduct meta-analytical research with a significant database.

ANALYSIS AND DISCUSSION OF RESULTS OBTAINED FROM DEFINING ISSUES TEST-2

This section presents three analytical moments regarding the use of DIT-2. First, the results of research are approached, followed by a discussion about the difficulties in their application, from the point of view of researchers and respondents and, finally, a comparative analysis between DIT-2 and other alternatives.

The analyzed researches follow a qualitative and exploratory approach on moral development in different organizations. They reveal that the objectivity of DIT-2 allows to identify the predominant moral development scheme. On the other hand, it is clear that in both

surveys the responses were distributed among the three development schemes, emphasizing the neo-Kohlbergian assumption.

The first survey was carried out with economic and social entrepreneurs from different organizations in Santa Catarina. After answered, the data collected by DIT-2 underwent a reliability check and did not show inconsistencies that would invalidate them. Each respondent completed a total of five questions about what to do in each dilemma, rated the importance of the 6p0 items on five-point scales and ordered the four most important items for each dilemma. Of all the participants, only three arguments were not classified, which did not affect the calculation.

The results of DIT-2, observed by Ames (2015), are contained in Table 2. The first four participants listed in Table 2 showed a moral development representative of the post-conventional scheme and of the consolidated type. The last two participants presented a result more distributed among the three schemes, with the scheme for maintaining standards slightly higher than the others. This represents a moral development of the kind in transition.

Table 2

DIT-2 results by scheme and type of moral development

AND	Personal interest	Maintenance of standards	Post-conventional	N2 Index	Type	"I can not decide"	Lib. Hmm.
E6	20.00	22.00	56.00	57.13	Consolidated	1	2
E5	18.00	32.00	50.00	48.16	Consolidated	1	2
E1	18.00	36.00	42.00	46.43	Consolidated	0	2
E4	12.00	42.00	42.00	41.19	Consolidated	0	3
E2	30.00	36.00	26.00	19.55	In transition	0	2
E3	24.00	34.00	22.00	17.42	In transition	2	1

Source: Ames (2015), as calculated by the Center for the Study of Ethical Development, on 15 Oct. 2015.

Of the five dilemmas, the majority of respondents did not decide for action in favor of the person involved in the story, according to the “humanitarian liberalism” indicator. This highlights the relevance given to maintaining the norms and rules of society, as described by Thoma and Dong (2012).

After triangulation between the results of DIT-2 and in-depth interviews, the research suggests that entrepreneurs with consolidated post-conventional moral development exercised, in conducting most of their real dilemmas, a substantive rationality. In these cases, the justifications and reports of the dilemmas were interpreted as representative of the “standards

maintenance” and “post-conventional” schemes. The ethical principles considered were: transparency, honesty, trust and self-realization.

The second interpretation of the research reveals a correspondence between the “type of development in transition” and instrumental rationality. The two entrepreneurs who had this result in the DIT-2 test revealed, by analyzing their dilemmas, justifications similar to the schemes of personal interest (S23) and the maintenance of standards (S4), predominantly. Both said they conducted decisions based on consensus, through dialogue between those involved and in a participatory manner. The rules are established by the team. In ethical terms, the principles are built by the members. These perceptions suggest a more flexible, adaptive conduct, including in moral terms, which leads to an adaptation of the conditions for solving problems. The adaptation of the means to the ends is more related to the idea of instrumental rationality. Besides that, the predominance of the “standards maintenance” scheme indicates, according to research by Rest et al. (1999a, 1999b), the prevalence of a heteronomous morality, that is, that comes from outside, in this case exemplified by the rules of society, groups and laws.

The second research under analysis was conducted in a group of Alcoholics Anonymous (AA) in the state of Santa Catarina. Regarding rationality, some organizational categories proposed by Serva (1997) were considered: hierarchy and norms, decision making and division of labor. Such elements were articulated with Kohlbergian categories: perspective taking, moral atmosphere and moral discussions. Data were collected through interviews, observation and application of DIT-2. The results of the latter are shown in Table 3.

Table 3

DIT-2 results by scheme and type of development

ID	Personal interest	Maintenance of standards	Post-conventional	N2 Index	Type	"I can not decide"	Lib. Hmm.
4	36.00	40.00	18.00	15.99	Consolidated	0.00	0.00
8	10.00	44.00	30.00	19.12	Consolidated	0.00	1.00
11	28.00	32.00	28.00	12.14	Transition	2.00	1.00

Source: Costa (2015), results of DIT-2 indexes calculated by the Center for the Study of Ethical Development on Oct 15, 2015.

Table 3 indicates that two participants have a predominant moral development in the norm maintenance scheme (S4) and in the consolidated type (ID 4 and 8). The third participant (ID 11) is representative of the type of moral development in transition, as it presents an index distributed among the three schemes.

Respondent ID 8 had the highest post-conventional index, 30 points. It indicates how far the limb is towards the post-conventional scheme. However, the N2 index is lower than the previous one (19.12), adjusted due to the indexes of the other schemes. The educational level of this respondent (ID 8) is fundamental.

In this research, seven members who answered the test had a higher education level, but only one of them had the test validated by the CSED, that is, it passed the reliability check. The invalidity in the reliability check can occur if the respondent leaves questions blank, does not understand and mark by the syntax of the words or fill in randomly.

Two points related to the level of education deserve consideration. In addition to six tests of people with higher education being invalidated, the research individual with the highest index in the post-conventional scheme had only elementary school. These results do not correspond to the neo-Kohlbergian assumption that people with a higher level of education tend to have a higher moral development index.

The results obtained with the use of DIT-2, revealed respondents with different schemes and types of moral development. With this, we can interpret that sometimes they exercise a more instrumental rationality, based on personal interests or group norms, and sometimes they judge from their principles or by a rationality based on values.

These were the main points regarding the results obtained by researches that used DIT-2. They showed, however, the challenges and problems regarding the use of the proposed instrument. In the next section, these difficulties and limitations are discussed.

Difficulties in applying and responding to the Defining Issues Test-2

The application of DIT-2 by the researchers and the performance of the test by the participants point to some difficulties in its use.

In Alcoholics Anonymous, sixteen tests were applied, in groups of two to three members, at each meeting held in September 2015. Three forms were invalidated: one did not complete the filling, another did not understand the test and at all times consulted the answers of others and the third needed to be invalidated because the researcher had no instructions on how to proceed with respondents with visual impairment.

The data from the 13 tests were sent to the CSED, which in turn submitted them to the standard reliability check, validating only three of the 13 sent. Respondents were 37, 24 and 46 years old, with elementary, secondary and higher education, respectively.

The application of the test revealed some difficulties, as its content requires prolonged concentration and time availability on the part of the participants. In the survey of entrepreneurs, the test was applied individually to each organization, which required six meetings. With a larger sample, you could send the questionnaire via online form. However, due to the delay in filling out, it is likely that the respondents would not complete the test until the end.

The difficulties in responding to the test refer to the understanding of its content and how to complete it, as well as the delay time and its complexity. Some of the AA members, for example, chose not to answer the survey and hesitated to participate, for fear of the questionnaire. The size of the test also motivated some potential volunteers to drop out. Some of the entrepreneurs had difficulties facing the arguments described in the form of questions.

The filling time varied widely among the participants in both surveys. For entrepreneurs, the completion time did not exceed 45 minutes, while in the AA survey one of the participants took two and a half hours to complete the test. Despite their willingness to help with the research, some AA members did not pay due attention to the test. It was perceived that it was easier to apply the test with entrepreneurs than with AA members. Due to the difficulties, it was necessary to guide AA participants individually, which made the total time for application much longer than expected. The entrepreneurs received brief instructions, and both surveys contained prior instructions, written in the first part of the instrument.

Defining Issues Test-2 and other instruments

Analyzing both researches, it is clear that Kohlberg's (TDM) methodological theoretical framework (1992) can contribute to the study of instrumental and substantive rationality. On the other hand, the use of DIT-2 presented some difficulties in its application in different organizational contexts.

First, some of the Kohlbergian conceptions are not addressed directly by the instrument, and need to be complemented by other data collection techniques. As is the case with the moral atmosphere, which in organizational studies is related to an environment or culture open to the moral judgment of its employees. Another point worth mentioning is the content of the stories or dilemmas that make up DIT-2. Since its first version, the dilemmas are the same or similar to those used by Kohlberg (1992). It was from them that Kohlberg found, after much research, a pattern in the justifications. From these empirical data, the 12 arguments analyzed in each dilemma were formulated.

However, the dilemmas of DIT-2 do not refer to ordinary situations of public or private administrators. An instrument that makes use of public administration dilemmas is the SSMS - Stewart-Sprinthall Management Survey - considered in the study by Rizzo and Swisher (2004). In Brazil, in addition to DIT and Kohlbergian interviews, researchers use the Moral Competence Test (MCT or MJT), by Lind (BATAGLIA et al., 2010). Currently, new researches have developed their own instruments for the study of children's sociomoral development, through the statistical calculation of the item response theory (eg: TAVARES et al., 2016).

During the 41st International Conference on Moral Education (AME), held from November 4th to 7th, 2015, in Santos - SP, Georg Lind conducted a workshop on the Moral Competence Test. First, he presented the experiments under his guidance on the validity of the DIT and MCT instruments. Then he explained the steps for calculating the MCT. Lind (2000) undertook a validity examination of the DIT and MCT, showing the possibility of respondents to improve the index of their DIT tests, if they so wished. Asking the respondent to judge as if he were a philosopher, the results of the DIT were superior to the normal responses of the same participant, which does not happen in the MCT.

In view of this possibility, the available instruments for measuring moral development are discussed again. While DIT-2 measures the ability to recognize moral orientations involved in dilemmas (THOMA; DONG, 2014), the MCT measures the ability or competence to do so. According to Lind (2000), it allows an analysis of the person's moral principles, based on his cognitive and affective foundation, but offering a different examination of the rational and emotional part. The MCT measures the degree of moral competence and Lind (2000) believes that it can be the bridge between good intentions and moral behavior.

Perhaps what should be done to investigate judgment or moral competence in the Brazilian organizational context is also to develop an instrument for collecting and investigating data. However, if we consider Kohlberg's (1992) findings, the type of dilemma and the decision per se are not aspects that define moral development. For Kohlberg (1992), the justifications or reasons attributed to the choice itself are what define the form of moral reasoning and, therefore, its stage of development. The first step would be to conduct in-depth interviews, to know the moral dilemmas faced by public or private administrators and what were the justifications given in the decisions. Knowing some dilemmas inherent to administrators, one can place them under the analysis of other participants to find out different justifications.

TDM suggests a more comprehensive view of moral judgments. Ethical judgments are made in all cases where values or principles are under analysis. Even though the scheme of personal interests prevails, there is a moral judgment. Approximating this premise to the

analysis of rationality in organizations, we must assume that these moral judgments are linked to both substantive and instrumental rationality. With this relationship confirmed, we can consider ethical judgments as elements of both rationalities. Thus, it is possible to add such judgments as components of instrumental rationality.

FINAL CONSIDERATIONS

The purpose of this article was to analyze the use of DIT-2 in studies on moral development and rationality in organizations. The proposal was to analyze the first attempts to articulate the theory of moral development with studies on instrumental and substantive rationality.

One of the objectives inherent in tax research to Ramos' legacy (1989) is to advance knowledge about the Substantive Theory of Associated Human Life. Considering the conception of substantive rationality based on values, TDM seemed to offer a useful theoretical and methodological framework.

This article observed this possible relationship in research that, although they sought to understand these elements in depth, involved a small number of participants and used a scale developed in the field of psychology, revealing a need for further empirical research with a greater number of respondents.

With the analysis it can be stated that both instrumental and substantive rationalities are present in judgments of moral dilemmas, depending on the capacity for moral judgment and the complexity of the situations faced, that is, they are different types of rationality, but of a single reason, unique to each individual (MEDEIROS; SOUZA, 2010; SANTOS et al., 2019).

As explained, the use of DIT-2 is an objective option that allows a measurement consistent with the fundamentals of TDM. However, the methodological procedures, the verification of the results, the application and the responses in the Brazilian reality revealed some difficulties that lead to reconsider the criteria for choosing the instrument.

In the methodological procedures is one of the weak points in determining the result. Because the calculation is centralized by the CSED, it is not known to what extent the information “political positioning” interferes with the results obtained by DIT-2. Rizzo and Swisher (2004) raise this issue of political dimension at DIT and differences in the responses of liberals and conservatives in the United States.

In addition, it is not possible for researchers to detail the statistical calculations, since the calculations are not disclosed by CSED or described in theses and articles. As a result, a

longitudinal research project that makes use of an expressive database becomes unfeasible. The expense for calculating the results can be another barrier for large samples of respondents from DIT-2.

The surveys also revealed difficulties for its operationalization and the filling in by the participants. A review of the content and items that make up the dilemmas seems to be necessary. Some people needed help to understand and complete the instrument, in some cases taking up to two and a half hours to complete.

Exploratory research to improve the scale can help with this limitation. In addition to significant samples, it is necessary to adopt criteria for the choice and validity of instruments for research with respondents from Brazilian organizations.

A first step in establishing these criteria is to revisit scales on moral development. In this analysis, it is necessary to pay attention to the concept explicitly attributed to moral judgment and its approximation or distinction with other constructs, such as rationality and moral competence. Future research can analyze the relationship between these elements and the extent to which they are associated.

The analysis of the use of the Defining Issues Test - 2 in Brazilian organizations showed evidence of the difficulty in approaching theories and methodologies of other realities. The necessary rigor to bring a foreign instrument from the field of psychology to the organizational studies in the Brazilian context is evidenced. It is essential to adopt a “parenting posture”, in order to capture the essence of the theoretical, methodological and philosophical bases of TDM and the chosen instrument. In this way, one can know the boundaries and limitations of an approach and adopt it safely in Brazilian organizations.

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