Qualitative Questionnaire for the Identification of Cognems (Qualiquic): An Exploratory Technique to Identify Social Representation Contents and Relations

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ABSTRACT – While the investigation of social representation contents through the analysis of word associations is convenient, it does not directly inform about the nature of relationships that representation elements maintain with the social object. This paper presents a qualitative technique, Qualiquic, that is easy and simple to administer. Qualiquic has the advantage of gathering representation contents characterized by their relationships with the representation object, based on a simplified list of descriptive, practical, and evaluative connectors of the basic cognitive schemes model. The underlying theoretical principles are explained, and empirical guidelines are provided, as well as an empirical example of use.

Keywords: social representations, qualitative analysis, basic cognitive schemes, exploratory research

Questionário Qualitativo para a Identificação de Cognemas (Qualiquic): Uma Técnica Exploratória para Identificar Conteúdos e Relações de Representações Sociais

Resumo - Embora a investigação de conteúdos de representações sociais por meio de associações de palavras seja conveniente, ela não informa diretamente sobre a natureza das relações que os elementos representacionais mantêm com o objeto social. Este artigo apresenta uma técnica qualitativa – Qualiquic – que é fácil e simples de aplicar, e tem por vantagem reunir conteúdos representacionais caracterizados por suas relações com o objeto de representação, baseando-se numa lista simplificada de conectores descritivos, práticos e avaliativos do modelo dos esquemas cognitivos de base. Os princípios teóricos subjacentes são explicados e diretrizes empíricas são fornecidas, bem como um exemplo de aplicação.

Palavras-chave: representações sociais, análise qualitativa, esquemas cognitivos de base, pesquisa exploratória

According to a structural approach, a social representation is a set of knowledge elements linked by relations to a social object, i.e. a topic that is the theme of intragroup communication due to being relevant to the group (Flament & Rouquette, 2003). Cognems are the basic units of elements in each representation (Codol, 1969; Rouquette, 1994).

Numerous studies have demonstrated that there are different roles of social representation elements in terms of representation functioning. The most established development is central core theory, which supports that a few elements form a central core that defines and organizes the social representation and contrasts with a peripheral system that contains conditional and flexible elements, which deal mostly with practical aspects, eventual contradictions, and idiosyncrasies (for reviews, see Abric 2002; Abric & Tafani, 2009).

Therefore, any study aimed at characterizing social representations and their associated processes needs to be based upon knowledge of the elements. It usually means to characterize the basic structural properties (i.e. symbolic value, associative power, salience, and connectivity) of the main ideas and beliefs about a social object (Moliner, 1994). A list of elements can convey the main ideas of a social representation and appropriate techniques to measure those properties in a more refined manner way are available in the field (Lo Monaco, Lheureux & Halimi-Falcowicz, 2008; Moliner, 2001; Rouquette & Rateau, 1998).

In order to proceed to structural characterization, it is essential first to have a list of cognems that are more typical within a group. That step of social representation characterization involves the identification of social representation elements and consists of a first exploratory phase in the research process. There are various techniques employed to identify representation cognems; the most diffused ones are probably interviews and association tasks (Abric 1994, 2003). Interviews to raise cognems are usually semi-structured and involve group members expressing and developing what they think about the social object (Abric, 1994). Qualitative analytic procedures are then used then make it possible to extract some basic ideas that can guide the construction of items or statements to be employed with further confirmatory techniques to assess structural status. While interviews provide possibilities for in-depth exploration of social representation content, they also have the disadvantage of demanding considerable effort to be conducted, such as specific training, higher demands of time, and participant

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availability. In addition, data derived from interviews are usually less structured, which might create complications for analytical integration.

An alternative highly diffused in social representations research to describe the content of representations is called association or evocation tasks. They consist simply in asking a group member to provide a number of responses evoked by an inducting word that refers to a social object (Vergès, 1992). The responses are then usually grouped into categories according to their meanings; and those categories are equivalent to social representation elements, as they convey a basic idea related to the social object. There are different criteria for that categorization process. In some cases it is similar to content analysis directed by semantic similarities, while in others it is simple lemmatization (cf. Flament & Rouquette, 2003). The words or categories resulting from association tasks are usually the basis for labeling social representation cognems to beretained for further study. It is also possible to obtain preliminary structural characterization directly from association data. Prototypical analysis is a very popular procedure that crosses word evocation order and frequency data relative to associations in order to point out highly frequent and readily evoked responses as likely central elements (Vergès, 1992; Wachelke & Wolter, 2011).

Employing word association techniques to explore social representation structure is very convenient, as those tasks are fast and simple and allow gathering data from sufficiently large samples relatively quickly. The nature of association tasks also gives considerable freedom to the participant who can express his or her views about the object with little or no interference from researchers. However, those tasks have a serious limitation. Their most common form, i.e. instructions such as "Please write down the first words that come to your mind when thinking of… [social representation object]" does not provide information about the nature of the relations of a response or at later stages an element with the social object of interest. For example, a fictitious association task about the social representation on "politics", with a high frequency response, "corruption", would be too general. What would participants have in mind to evoke that word? Is politics characterized by generalized corruption? Does corruption influence the political sphere? Should politics not be corrupted? Is corruption caused by political structure? There are various possibilities of links, some closer in meaning than others, all equally legitimate to the participant given the open-ended instructions of association tasks.

This ambiguity leads to excessive dependency on decisions by the researcher, who would have to decide about the formulation of element-based items for confirmatory structural techniques, or even in the case of an interpretation of results from conclusive prototypical analyses, in applied short-term investigations. In addition, association tasks might be contradictory because it takes away the role of research participants "as experts on their own production," an expression employed by Guimelli and Rouquette (1992), generating higher probability of misinterpretation of data. In contrast, the choice to go back to participants in order to solve uncertain interpretation of responses might be tricky. In some cases, the generalization implied by association

tasks can be solved with the inclusion of further questions in the research instrument while in others a set of interviews may need to be conducted in order to clarify meanings partcipants' answers.

The present paper aims at describing a new qualitative technique that is easy and simple to administer (like association tasks) and has the advantage of gathering representation element contents characterized by their relationships with the representation object. As such, it is supposed to be an alternative methodological resource for the initial exploration of social representation structure, i.e. the identification of social representation elements. The proposed technique is called Qualitative Questionnaire for the Identification of Cognems, which we will refer as Qualiquic in short.

The Theoretical Model Behind Qualiquic

In order to account for relationships between objects and elements, there must be a reference model to conceive such links. Qualiquic is based upon the frame of the basic cognitive schemes model, also called SCB, originated from the French expression *Schèmes Cognitifs de Base*. According to the SCB model (Guimelli & Rouquette, 1992; Rouquette, 1994; Rouquette & Rateau, 1998), there are 28 possible relationships between social representation objects and elements, which Rateau (1995) later classified into three meta-schemes according to their empirical associations: Description, Praxis, and Evaluation. Description comprises 9 connectors that express lexicographic characterization, synonymic, composition and antonymic relationships. Praxis is a meta-scheme that contains connectors communicating a practical role of representation elements and comprising a functional dimension. Such connectors link aspects involving actors, objects, tools, and actions. Finally, Evaluation groups together connectors activated when elements consist of judgments and evaluation of a situation including causality attribution. This meta-scheme is strongly related to norms and values. Figure 1 presents the list of all SCB connectors, each one with a three-letter name and their corresponding meta-schemes. The formalization is done through a frame called triplet, in which two lexical terms (*A* and *B*) are linked by a connector (*c*). In social representations research, *A* usually refers to the social representation object and *B* is the label related to the social representation element.

The incorporation of SCB connectors in an exploratory social representation technique supposed to be simple and not a burden to participants might be difficult. However, it is possible to present a few relationships conveying meanings that are related to the global meaning of SCB meta-schemes. Such an adaptation was first introduced by Ruiz and Coy (2004), who asked participants in a study about the social representation on democracy to indicate which links their association responses had with the inducting word (i.e. democracy). There were six items: synonym/antonym, part, cause or effect, example, action, and quality. The items synonym/antonym, example and part refer to connectors included in the Description meta-scheme, while action is related to Praxis connectors and quality and cause or effect convey the meaning of Evaluation connectors (see Table 1).

Table 1. The basic cognitive schemes model (the text of relation expressions has been translated and adapted from Rouquette & Rateau, 1998)

SCB Meta-scheme	Connector	Relation expression
Description	SYN	A means the same thing as, has the same meaning of B
	DEF	A can be defined as B
	ANT	A is the opposite of B
	TEG	A is a part of, is included in, is an example of B
	TES	B is an example, a particular case of, is included in A
	COL	A belongs to the same general class (category) than B
	COM	A is a component of B
	DEC	B is a component of A
	ART	A and B are both components of the same thing (same object)
Praxis	OPE	A does B
	TRA	A acts over B
	UTI	A uses B
	ACT	B does A
	OBJ	A is an action that is applied over B
	UST	B is used to do A
	FAC	B is someone (a person, an institution…) who acts over A
	MOD	B is an action that can be done over (about, in the case of) A
	AOB	B is a tool that is used over (about, in the case of) A
	TIL	A is used by B
	OUT	A is used to do B
	AOU	A is a tool that can be used for B
Evaluation	CAR	A is always characterized by B
	FRE	A is often characterized by B
	SPE	A is sometimes characterized by B
	NOR	A must have the quality of B
	EVA	B evaluates A
	EFF	A causes B; B is a effect of A
	COS	A is caused by B; A depends on B

Likewise, Qualiquic is a short questionnaire consisting of six open-ended questions covering SCB-derived connectors. Table 2 presents the six connectors formulated for the instrument. They refer to meanings that are broader than the ones from the classical SCB model, which have more precise contours. The figure includes the four-letter acronym by which each Qualiquic connector is designated. A four-letter convention was chosen to differentiate from the three-letter SCB names. Inspired by the original SCB meta-scheme, a question in informal language is to be employed to ask participants to produce content about each connector.

BDEF is a connector that broadly expresses the meaning of the Description meta-scheme. By asking a definition, e.g. "what a social object is", synonyms, examples, characteristics and components of it are activated. BACT and AACT are two connectors that are inspired by Praxis. Since Praxis connectors communicate functional aspects of a social representation, by means of tools, actors and targets, the use of the word "influence" provides a generic way of referring to practical uses or roles which the social object might be involved with The existence of two connectors grasps the two possible directions of influence, with the object and element both as targets and sources of interference.

Table 2. Qualiquic connectors: original SCB meta-schemes, connector labels, relation expressions and question wording from the actual instrument

Original SCB Meta-scheme	Connector	Relation expression	Qualiquic question
Description	BDEF	B defines A	What is [social object]?
Praxis	BACT	B acts over A	What can interfere with or influence [social object]?
Praxis	AACT	A acts over B	What can [social object] interfere with or exert influence on?
Evaluation	BEVA	B evaluates A	What can make [social object] good or bad?
Evaluation	BCAU	B causes A	What causes [social object)?
Evaluation	ACAU	A causes B	What does [social object] cause?

The remaining three connectors are based upon the Evaluation meta-scheme. BEVA comprises the evaluations and norms conveyed by the element to qualify or judge the social object. BCAU and ACAU communicate causality in both directions, with the object and the element resulting in a cause and effect.

Empirical Guidelines

Qualiquic consists in six open-ended questions dealing with the connectors shown in Table 2. For each one of them, research participants are invited to provide two responses focusing on two different aspects of the social object. Respondents are instructed to write a sentence for each aspect; it is not an association procedure and neither a task requiring elaborate discourse production. The instructions are simple. It is stated that the questionnaire is part of a study aiming at conducting a first survey of the opinions of participants about certain themes of social life. Each question related to the connectors (see the informal language questions in Table 2) is preceded by the expression "in your opinion", in order to emphasize to the participant that common sense knowledge is required, not technical or academic.

The administration of Qualiquic instruments can be collective or individual. It usually requires very little time to be completed; around 15 minutes with undergraduate student samples. Evidently, completion time is expected to increase with samples less familiar with school and academic tasks. Regardless, the demands of Qualiquic items are simple and straightforward, so it is supposedly suitable for samples at secondary school level or higher.

Analysis of Qualiquic-generated data is in principle qualitative. Data might be organized as lists of responses for each connector as a sort of panel covering a broad content field. Keeping track of who said what is not important here. The basic idea is to have the various ideas linked to the social representation object from various relation dimensions provided by the connector-based responses. After reading the responses having in mind the research problem at hand and the existing literature on the topic, the researcher should be able to select from 10 to 15 social representation elements conveying specific relations with the social object. This can later serve as the source material for the planning of further studies, whether concerning quantitative investigation of social representations by means of questions or scale items, or through providing the main topic structure for in-depth interview studies.

Qualiquic data can be also analyzed according to a quali-quantitative framework. Possibilities include the categorization of responses and frequency count within each connector, or perhaps correspondence analysis with text data, including Qualiquic connectors as illustrative variables.

The sample size should be determined according to planned data analysis procedures. A standard qualitative exploration of social representation content through Qualiquic with 25 participants can provide enough material to identify social representation elements. That is, if a saturation criterion (systematic repetition of content in the sample and ceasing of emergence of new content), common in qualitative research (Francis et al, 2010), is adopted. If, on the other hand, the researcher plans to organize data so as to conduct descriptive textual statistics, the number of participants would probably have to increase considerably.

Empirical Example

In order to illustrate the use of Qualiquic, the results derived from it and how they can lead to the identification of social representation elements, a brief empirical example is presented below. A sample of 26 Psychology undergraduate students (age M = 20.4 years, SD = 2.06) from a Brazilian university, 18 of whom were women, completed Qualiquic questionnaires about one social object, "work". Work is an important topic for university student groups, which various studies have dealt with it as a social representation (see Flament, 1994; Milland, 2002). The responses were listed for each connector. Furthermore, a list of elements of the social representation on work has been created from qualitative analysis. Table 3 presents examples of Qualiquic responses, their corresponding connectors and the final formulation of six elements. It is important to stress that each element of the final list was based upon groups of responses related in meaning, but due to space reasons only two responses per element are presented in Table 3.

The element list could be further employed to generate Likert scale items covering representational content (e.g. Carugati, Selleri & Scappini, 1994), questioning – *mise en cause*, refutation items (e.g. Moliner, 2001) or context

Table 3. Examples of identified elements of the social representation on work and some corresponding responses upon which the elements were based

Connector	Qualiquic responses	Element of the social representation on work
BDEF	"Work is a way of obtaining money to invest in my goals"; "Work is a paid activity done by an individual"	Work is a remunerated activity
BACT	"The motivation of the worker in performing a role influences work"; "The lack of motivation interferes with work"	Work is affected by motivation
AACT	"Work can be the cause of illness and unhappiness"; "Work can influence the health of a worker"	A bad job affects the health of workers negatively
BEVA	"The sense of fulfillment by the worker evaluates work"; "Personal achievement and satisfaction evaluate work"	Good work leads to personal fulfillment
BCAU	"The need of having income causes work"; "Work is caused by reward; man always seeks something in exchange for his work"	The need of money makes people work
ACAU	"Work causes an increase in social networks and socialization"; "Work leads to knowing more people"	Work leads to more interpersonal relationships

independence tasks (Lo Monaco et al, 2008). As also mentioned previously, each element statement can be employed as prompts for further qualitatively oriented research, with various methodological designs such as focus groups or interviews.

Conclusion

In contrast to word association techniques, Qualiquic does not aim at retrieving the most spontaneous associations linked to a social object. It aims at describing a wider terrain of social representation content by requesting information related to the main relationship dimensions of social representations. As such, it should not be used as the only source of data from social representation characterization studies, since it does not allow the direct assessment of element salience.

Rather, as an exploratory resource in the initial phases of representation characterization, Qualiquic might be very useful due to its higher coverage potential. Word association tasks might lead participants to refer mostly to readily accessible representation material, whereas Qualiquic stimulates them to judge aspects of a social representation that might not always be communicated verbally on their own initiative, or might even be absent from actual discourse. Classical studies provide plenty of examples, in such cases Jodelet's (1989) study about the social representation on madness in countryside communities, which showed that some important elements of the representation were completely absent from interviews and could only be grasped through the observation of popular practices. More recently, considerable attention has been given to the phenomenon of important representation elements that are not expressed in normal word association tasks (Guimelli & Deschamps, 2000; Menin, 2006).

Through simple questions that deal with descriptive, practical and evaluative aspects of social representations, Qualiquic partially neutralizes the problem of neglecting important contents. That is, by giving more possibilities of expression of elements that are not favored by association tasks. The inclusion of relations linking the social object and its elements also adds further detail to the first exploratory steps in social representations research. This could only be obtained by interviews and classical SCB tasks, both of them demanding higher efforts from participants. Such qualities contribute to making of Qualiquic a valuable and easy resource for the characterization of social representations in basic and applied research.

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