Anales de Psicología
ISSN: 0212-9728
servpubl@fcu.um.es
Universidad de Murcia
España

Wachelke, Joao; Natividade, Jean; De Andrade, Alexsandro; Wolter, Rafael
Ego, Alter and Object: Explaining Personal Involvement with a Social Object Based on Perceived Collective Involvement and Group Identification
Anales de Psicología, vol. 32, núm. 1, enero, 2016, pp. 174-182
Universidad de Murcia
Murcia, España

anales de psicología, 2016, vol. 32, nº 1 (enero), 174-182
http://dx.doi.org/10.6018/analesps.32.1.186451

ISSN edición impresa: 0212-9728. ISSN edición web (http://revistas.um.es/analesps): 1695-2294

Ego, Alter and Object: Explaining Personal Involvement with a Social Object Based on Perceived Collective Involvement and Group Identification

Joao Wachelke[1*], Jean Natividade[2], Alexsandro De Andrade[3] and Rafael Wolter[4]

[1]*Federal University of Uberlandia (Brazil).*
[2]*Pontifical Catholic University of Rio de Janeiro (Brazil).*
[3]*Federal University of Espirito Santo (Brazil).*
[4]*State University of Rio de Janeiro / Salgado Oliveira University (Brazil).*

Título: Ego, Alter y objeto: explicando la implicación personal con un objeto social basada en la participación colectiva percibida y la identificación con el grupo.
Resumen: El trabajo tiene como objetivo poner a prueba un modelo para predecir la implicación personal con un objeto social, inspirado en el triángulo de la psicología social propuesto por Moscovici. El triángulo une tres aspectos esenciales: el individuo, el Otro y un objeto social. Fue puesto en práctica como un modelo empírico para explicar la implicación personal de un tema social desde dos factores de predicción: la implicación colectiva percibida de los miembros del grupo con el mismo tema y la identificación con el grupo. La muestra fue formada por 805 estudiantes universitarios brasileños. Los participantes completaron escalas que medían su identificación con los estudiantes universitarios, su percepción de la implicación de los estudiantes con dos objetos sociales, curso universitario o trabajo, y su implicación personal con esos temas. Los análisis de regresión apoyan la hipótesis de que las dos variables y su interacción mantienen relaciones positivas con la implicación personal. La discusión se centra en la relatividad de los resultados a objetos específicos, la complejidad de los factores determinantes de la implicación personal y la pertinencia de la mirada triangular para caracterizar la investigación psicosociológica.
Palabras clave: Implicación personal; identificación con el grupo; mirada de la psicología social.

Abstract: The present paper aims at testing a model to predict personal involvement with a social object which was inspired by the social psychological triangle proposed by Moscovici. The triangle bridges three essential aspects of social psychology: the individual, the Other and a social object. It was operationalized as an empirical model to explain personal involvement with a social topic from two predictors: perceived collective involvement of group members with the same topic and group identification. The sample was formed by 805 Brazilian undergraduates. The participants completed scales that measured their identification with university students, their perception of students' involvement with two social objects, university course or job, and their own personal involvement with those topics. Regression analyses supported the hypothesis that group identification, perceived collective involvement and their interaction maintained positive relations with personal involvement. Discussion focuses on the relativity of results to specific objects, the complexity of determinant factors of personal involvement and the pertinence of the triangular look to characterize social psychological research.
Key words: Personal involvement; group identification; social psychological look.

Introduction

The present paper is directed to the investigation of evidence of some level of group influence in how people feel that they are involved with objects of their everyday lives. By such objects we refer to common issues, general topics that are relevant for social life and imply groups at some extent (Flament & Rouquette, 2003). So, for example, "democracy" can be understood as one such topic "…for groups of a political nature; 'pop music' is most likely not, under usual circumstances. But it would probably be a social object for groups related to arts or culture" (Wachelke, Demantova, & Guisso, 2012, p. 202). A social object can then be broadly defined as a topic about which people talk and which concerns them because it affects their lives at some extent.

A social psychological triangle

The relationship between the individual, the group and a social object is something that is essential to the very core of social psychology. Instead of defining the field of social psychology by an object of study, Moscovici (1984) suggested that the hallmark of the discipline is given by an integrative characteristic ternary look. According to this author, the social dimension of social psychology should be conceived as a triangle that connects three instances of phenomena: the individual subject, Ego; the social subject ("Alter" or "the Other") and the object (the social "Object"). The three vertexes of such triangle should always be taken into account, for they all determine and are determined by each other. A psychosocial phenomenon would involve the consideration of all three instances. In Doise's (1982) terms, a social psychological analysis should involve the articulation of different levels of explanation of phenomena in the individual – collective continuum.

Allport's (1954, p. 4) classical definition of social psychology as "an attempt to understand and explain how the thought, feeling, and behavior of individuals are influenced by the actual, imagined, or implied presence of others" is somewhat compatible with the characteristic look proposed by Moscovici. Allport's definition may then situate the Alter instance of the triangle by stating that such implied presence is about an individual's position in the social structure and their membership in a cultural group. According to such perspective, the central trait in any social psychological project is the reciprocal interchange between an individual and one or more groups, collective instances

*** Dirección para correspondencia [Correspondence address]:**
Joao Wachelke. Instituto de Psicologia. IPUFU. Av. Pará 1720. Uberlândia – MG (Brazil). CEP 38400-902.
E-mail: wachelke@yahoo.com

that such person belongs to, has as positive or negative references, or maintains some other kind of relationship. This is compatible with Moscovici's (1984) understanding: the relationship between Ego and Alter consists in constant mediation of the two terms.

In one way or another, the subfields in social psychology all address the relationship between Ego and Alter. Social cognition focuses on the individual processes with which people generate, manage and use information about themselves and other people (Arcuri & Castelli, 2000; Fiske & Taylor, 1991). Social influence has organized itself as a field interested in understanding conformism, obedience, social impact and innovation processes, but as Garcia-Marques (2000) points out, its definition as the study of the modification of behavior by the real or imagined presence of others is so broad that it might be confused with that of social psychology itself[2].

Personal involvement

Personal involvement is a notion that makes it possible to assess very closely the connections concerning the individual, the group and the social object. In this section we will introduce briefly what it is and how it has been studied, and afterwards we will address the relationship of personal involvement with the social psychological triangle proposed by Moscovici.

Gruev-Vintila and Rouquette (2007) translated the French *implication personnelle* – which might have been literally translated as personal implication – as personal involvement. Rouquette (1988, 1996, 1997) proposed such notion to refer to a set of theoretical dimensions that assess the intensity of the individual connection between a person and a social object. The author posited that the dimensions express different ways of feeling involved with the social object.

The involvement dimensions are proximity, social valuation and perceived capacity or possibility of action[3]. The proximity dimension is related to the understanding that a given social object is particularly relevant to the individual him/herself. In order to illustrate the meaning of such dimension the author states that proximity may be conceived as a scale with values ranging between two poles: one in which the object concerns the individual him/herself and that individual alone (strict identification) to another in which the topic concerns virtually everyone, so the identification of the individual is not differentiated (diffuse identification). The second dimension, object valuation, refers to the stake value of the social object, ranging from an assessment that the topic is an unimportant issue (minimum valuation) to "a matter of life and death" (maximal valuation). Finally, the perceived capacity of action is the perception of control that an individual has in terms of outcomes related to the object, ranging from "there is nothing I can do about it" (minimal) to "it all depends on me" (maximal) (Flament & Rouquette, 2003; Rouquette, 1997). Some authors have also proposed a differentiation between perceived capacities of action from the group and from the individual (Guimelli & Abric, 2007; Ernst-Vintila, 2009), but we will deal only with the perceived capacity to act on a personal level as part of the personal involvement construct.

Personal involvement dimensions are usually treated as individual properties that form a system of coordinates (Rouquette, 1997), but they are theoretically linked to group knowledge such as social representations or shared beliefs. Gruev-Vintila and Rouquette (2007, p. 560) defined it "as a subjective, but socially determined frame of reference (…)". Rouquette (1997) admitted that circumstantial involvement with regard to an object might be more related to situational constraints than group influence, socialization and history, but when the author refers to personal involvement from a social psychological point of view, his interest lies on the involvement that is due to cultural positions. Lheureux, Lo Monaco and Guimelli (2011) later referred to this kind of personal involvement as sociosymbolic involvement.

It is very usual to measure the level of personal involvement dimensions through dichotomous or Likert-type items. In Rouquette's view, described above, the three dimensions are supposed to be theoretically independent, but empirical correlations of proximity and social valuation were considered as a coherent pattern, "because I value without a doubt, in our cultures, that which involves me personally" (Rouquette, 1997, p. 111).

Gurrieri, Wolter and Sorribas (2007) measured the three dimensions with three separate Likert items in research carried out in France. In contrast, Lheureux *et al.* (2011) have explored the component structure of personal involvement with six scale item – two per dimension – administered to a French sample of university undergraduates, and could not retrieve three independent components. Based on their data, the solution that made more theoretical sense was a two-dimensional one in which a first component gathered proximity and perceived possibility of action items and a second one had the two items for social valuation. Another study with a comparable sample, this time conducted by Demarque, Lo Monaco, Apostolidis and Guimelli (2011), explored the structure of personal involvement as well; the solution that was considered more satisfactory had a single factor with eight Likert items from all three dimensions.

[2] While we consider that the social psychological phenomena linking individuals and groups are compatible with Moscovici's proposal, it is important to state that the triangle expands the possibilities of a social psychology beyond individualistic conceptions. See Farr (1994) for further elaboration on this point.

[3] There is some variation in terms of the names given to the involvement dimensions. In one of the first essays about the notion of personal involvement, Rouquette (1997) called them identification, theme valuation and perceived capacity of action. The identification dimension is most often called personal identification, but Gurrieri, Wolter and Sorribas (2007) chose to call it proximity to avoid confusion. We followed their suggestion and thus employ the word proximity to refer to the first dimension, mainly because the paper also deals with similarly named group identification construct. In spite of those minor differences, they do not imply any conceptual changes.

Guimelli (1999) stated that involvement could play an important role as an explanatory social psychological variable, and research has already collected a few results that point in that direction. High and low levels of personal involvement are associated with the activation of different logical schemes when thinking about a topic (Gruev-Vintila & Rouquette, 2007) and different reasoning strategies to justify beliefs (Guimelli, 2002). Involvement has also been related to the social practices carried out by group members: Flament and Rouquette (2003) have proposed the hypothesis that personal involvement might be a mediator between group knowledge and social practices related to such knowledge. Lheureux *et al.* (2011) obtained some confirming results: the effects of some beliefs shared by French undergraduates about globalization went through total mediation by personal involvement in order to affect their intentions to undertake practical actions related to globalization.

Ego, Alter and Object in the context of personal involvement

Gurrieri, Wolter and Sorribas (2007) link personal involvement directly to Moscovici's triangle. According to them, personal involvement would act between the Ego (individual) and the Object (the social object). But at the same time, they reckon that a broad conception of involvement can also be thought to act on the other relations of the triad. They suggest that the relationship between Alter and Object can be conceived as a force of collective involvement. By doing so, the authors express a sociological, top-down approach of the determination of personal involvement, based on the idea that the source of an effect on individual processes is to be found at the social level.

Measuring involvement at a collective level obviously transcends individual processes. But group knowledge does play a role in individual knowledge by means of internalization processes, and a person is often aware, either consciously or unconsciously, of group culture, positions, norms and expectations concerning social reality (Wachelke, 2012a). Of course, individuals might have a perception of group involvement that is not actually true; phenomena such as illusory consensus (Moliner, 2001) and pluralistic ignorance (Katz & Allport, 1931) are examples of that. What matters, even in such cases, is the representation that the individual has of group reality. It is such representation that might have an effect on individual actions and thought, rather than objective reality itself (Abric, 1987; Moscovici, 1982). In the case of involvement, we suggest as a hypothesis that, at an individual level, a force that might influence personal involvement is the subjective, perceived collective involvement of the individual's ingroup.

Then, two relationships in the social psychological triangle can be translated to the context of involvement, as they can be conceived as relationships between instances of the triangle. Personal involvement can be thought to express aspects of the relationship between a person (Ego) and a social object (Object). Likewise, the collective involvement of a group with a social object expresses the Alter and Object relationship. At the individual level, this last relationship concerns the individual perception of collective involvement of a group. But there is still one side of the triangle that is uncovered: the relationship between Ego and Alter. What social psychological process could be invoked to account for such force?

Group affiliation is a key notion to think about an articulation between an individual and a group sphere, and even more when a person psychologically feels that he/she is attached to a meaningful group (Wachelke, 2012b). The knowledge that involves group belonging and the emotional feelings linked to such membership are called social identity (Tajfel, 1972), and are at the core of the social identity approach (Hogg & Abrams, 1988). In this perspective, the group instance (Alter) acts or influences individuals because someone's self concept includes their group affiliation (Hogg, 2006).

The social identity approach provides us with the mechanism to assess the strength of the connection between an individual and a group that he/she is a member of. Such connection is called group identification. According to Leech *et al.* (2008), the traditional conception of group identification in social psychology is one-dimensional, referring to a general connection with the ingroup. Such connection is often expressed in terms of subjective importance (e.g. Kiesner, Cadinu, Poulin, & Bucci, 2002), connection strength (Fisher & Wakefield, 1998), or of attraction to a group (Bouas & Arrow, 1996)[4].

In social identity research, results have shown that group identification has a role on bridging group norms and individual intentions to follow them. Terry and Hogg (1996) found out that students' identification with their group moderated their willingness to conform to group norms; people who identified highly with the group adhered more to such norms than did low identifiers. Jetten, Spears and Manstead (1997) also noted that students who identify more with their university tend to follow an intergroup discrimination norm more strongly. Jetten, Postmes and McAuliffe (2002) demonstrated that people with high identification with an individualist culture tend to conform to a salient group norm of individualism. In the same direction, Guimond (2000) found results that show that the identification with the category of Canadian officers moderates the internalization of group culture. Would such moderating role be found in the context of a relationship between the involvement with a topic that someone attributes to the ingroup and that person's involvement with

[4] For the record, multidimensional perspectives have recently gained strength (e.g. Bhowon & Tseung-Wong, 2004; Duckitt, Callaghan, & Wagner, 2005; Leach et al., 2008). However, these perspectives are not addressed here, as the proposed study does not consider specific hypothesis related to the group identification dimensions.

that same topic? That is something that we would like to find out.

Inspired by Moscovici's triangle as a metatheoretical principle, in the present paper we aim at verifying if people's personal involvement with a given social topic can be predicted by their identification with a social group and the perceived collective involvement of the members of such group with the same topic. In order to operationalize such proposal, we considered the university students group and their personal involvement and perception of collective involvement regarding two social objects: "university course" and "job". These topics were chosen because of their high salience in the lives of undergraduates who study to prepare themselves for a future job.

Based on the conception of personal involvement as a construct that is socially determined (Gruev-Vintila & Rouquette, 2007) and influenced by the involvement of an ingroup (Gurrieri *et al.*, 2007) we expect to fit models with both perceived collective involvement and group identification positively correlated with personal involvement. Additionally, past results indicating the moderating role of group identification in the individual conformity to group norms (Guimond, 2000; Jetten *et al.*, 1997; Jetten *et al.*, 2002; Terry & Hogg, 1996) suggest that an interaction between the two predictors should also be found. The predicted pattern is that high identifiers with the group will present a stronger influence of the perceived group involvement with the topic than low identifiers; such individuals are probably more prone to follow group positioning and that should also apply to the involvement with a social topic. Norms and involvement are different level variables, but we propose that similar effects are found since in both cases a highly identified individual should acknowledge a group pattern and have a tendency to conform to it.

Method

Participants

A total of 805 university undergraduate students from eight Brazilian states – Bahia, Espirito Santo, Mato Grosso do Sul, Pernambuco, Rio Grande do Norte, Rio Grande do Sul, Rondonia and Santa Catarina – took part in the study. The states covered all five Brazilian geographic regions; Espirito Santo (Southeast region) was the state with the highest number of participants (N = 188, i.e., 23.4%) whereas Santa Catarina (South) had the fewest (N = 42, i.e., 5.2%).

Most of the participants were women (535, i.e., 66.5%), and the mean age of the sample was 22.8 years (SD = 5.7 years), ranging from 16 to 51. The participants were enrolled in a broad spectrum of university fields, having been recruited in lectures of courses related to human, health, social, exact, applied and basic sciences.

Instruments

Two questionnaires in Portuguese language were employed in data collection. The questionnaires were presented as Google Docs online forms to be completed in the Web browser environment. Each questionnaire included questions related to one of the two social objects. Thus, the participants' personal involvement was measured either towards the topic of "job" or towards the "university course". Each instrument had a set of items in Likert-scale format related to various beliefs concerning the topic in question, as well as sociodemographic questions covering participants' sex, age, university course and Brazilian state of residence.

Three sets of items were of particular interest to the present study, all of them with a 7-point Likert format – ranging from 1 – *Fully disagree* to 7 – *Fully agree*. A first set had six items that were supposed to cover Personal Involvement with the topic in question. The items were statements expressing the three theoretical dimensions of Personal Involvement (Proximity, Capacity of Action, Object Valuation), including two per dimension. The content of items was based in measures employed in previous studies and the relevant literature (Flament & Rouquette, 2003; Gruev-Vintila & Rouquette, 2007; Gurrieri, Wolter, & Sorribas, 2007).

The items covering the proximity dimension, adapted to the "university course" topic, are translated to English as follows (short label in parentheses): "The university course is a subject that affects me directly" (*PI-affects*), and "I feel that I have a strong personal connection with the subject university course" (*PI-connection*). Perceived Capacity of Action items were "The university course is a subject that depends a lot on me" (*PI-depends*) and "I can do something useful about the subject university course" (*PI-useful*). Finally, the items for Object Valuation were "The university course is among the most important matters of my life" (*PI-important*) and "I value the subject university course a lot" (*PI-value*)[5].

A second set of items contained six other items that aimed to measure the participants' Perception of the Collective Involvement of university Students (PCIS) with the topic in question (job or university course). The items from this second set were similar to those used above to measure personal involvement, but they were formulated in a way that allowed them to refer to the "group of university students" rather than to the respondent him/herself. So the perceived collective involvement (PCIS) version of the item PI-affects relative to the topic university course was "The

[5] The original items, in Portuguese, were: "O tema curso universitário é algo que me afeta diretamente" (*PI-affects*), "Sinto que tenho uma ligação pessoal forte com o assunto curso universitário" (*PI-connection*), "Curso universitário é um assunto que depende muito de mim" (*PI-depends*), "Eu posso fazer algo útil em relação ao tema curso universitário" (*PI-useful*), "Curso universitário está entre os assuntos mais importantes da minha vida" (*PI-important*) and "Valorizo bastante o tema curso universitário" (*PI-value*).

university course is something that affects university students directly" (*PCIS-affects*). All other personal involvement items had their text adapted easily to reflect a perception of collective involvement of university students by participants, except for *PI-useful*, which was replaced by "University students can bring about significant changes concerning the subject university course" (*PCIS-significant*).

The third set of items comprised a Group Identification Scale validated in Brazil (Wachelke, 2012b). Such measure is composed by six items that assess the general connection strength with a given social group. Results from the validation study with a sample of 1203 university undergraduates and target groups "young people" and "university students" indicated a single factor structure and good reliability indexes for both ingroups, at .90 and .86. In the present case, the group of interest is that of university students; two examples of items are "Being a university student is an important part of how I see myself" and "I identify myself with the university students".

Procedure

Participants were recruited in person during lectures of their undergraduate courses. Research assistants briefed them about the general nature of a project aimed at characterizing opinions about topics of social life, and invited the attending students who were interested in taking part in the online study to write down their email accounts in a list. An email invitation with a link to the online questionnaire was later sent to them; each participant filled in a questionnaire about the "job" (N = 403) or the "university course" (N = 402). The assignment to one of the two conditions ("job" vs "university course") was random. The final response rates, after two reminder messages sent 12 and 22 days after the first invitation, were 44.6% for the "university course" questionnaire and 46.2% for "job". Only the fully completed questionnaires were considered for analysis.

Data analysis was conducted separately for the data sets relative to the two studied topics. The main analyses consisted in linear regressions testing the fit of models with personal involvement scores as criterion variables. The predictors were the perceived collective involvement measure and the scores of identification with university students, as well as their interaction terms. Results in the direction of the theoretical hypothesis – perceived group involvement moderated by group identification in the determination of personal involvement – would be supported by models with significant interactions. In order to carry out such analyses, a few other calculations were necessary, such as descriptive statistics and principal components analyses to explore the dimensionality of the personal and perceived collective involvement items. Statistical analyses were conducted with the software R (R Core Team, 2013).

Results

Before verifying the existence of a moderation relationship involving PCIS and group identification to predict personal involvement regarding the two social topics, it was necessary to assess the possibility to measure the perception of collective involvement of university students (PCIS) and personal involvement with the proposed psychometric scales. Principal component analyses were carried out in order to explore scale dimensionality. Concerning the scale of personal involvement towards "university course", the first component had an Eigenvalue of 2.85, explaining 48% of variance. The second component had an Eigenvalue of .97, smaller than 1; Kaiser's criterion (Kaiser, 1960) would recommend the retention of a single factor. A parallel analysis (Enzmann, 1997; Horn, 1965) with 1000 bootstrap samples had 1.16 as a first random Eigenvalue and 1.08 as a second, which is higher than the empirical value, and reinforces the consideration of only one component. Regarding the personal involvement with the topic "job", the first empirical Eigenvalue was 2.82 (47% of variance) and the second was 1.01. A corresponding parallel analysis had 1.17 as a first Eigenvalue and 1.09 as the second, which would again recommend retaining just one component.

Table 1 presents the standardized loadings relative to the retained component of each of the personal involvement scales. The consideration of a single component structure with all the six items is satisfactory, with the "university course" scale including items with loadings of at least .49, whereas the smallest loading relative to the personal involvement with "job" was .41. The results provide support for measures that include the three theoretical dimensions of personal involvement. The measures are also adequately reliable: Cronbach's alpha were .75 for "university course" and .76 for "job".

Table 1. Factor loadings from the principal component analyses of measures of personal involvement with "university course" and "job".

Item	University course	Job
value	.84	.80
connection	.76	.82
important	.75	.73
useful	.75	.74
depends	.51	.41
affects	.49	.50

Moving on to the PCIS items, a principal components analysis of the items concerning "university course" indicated the retention of two components. The first component had an Eigenvalue of 2.75 (46% of variance) and the second one had 1.17 (19%); the second random Eigenvalue from a parallel analysis was 1.08, hence inferior to the empirical one. A follow-up factor analysis with Oblimin rotation allowed us to obtain a medium correlation between the two factors (r = .39). The first factor gathered two items related to social valuation and one to proximity (PCIS-connection), whereas the second dimension had the

ones related to perceived possibility of action and the other one concerning proximity.

On the other hand, a principal components analysis of the PCIS with "job" maintained the pattern observed for personal involvement: a single component structure. The first empirical Eigenvalue was 2.82 (47% of variance), while the second one was .97, smaller than Kaiser's cut-off point of 1. The second random Eigenvalue from parallel analysis, in this case, was 1.09, and therefore the recommendation would be to keep only one component.

In spite of the emergence of two components in the analysis of "university course" data, the single-component structure seemed to be the best solution, since it was a parsimonious solution applicable to all the other instances of involvement that were studied. Considering that the two PCIS with "university course" items were correlated and that a single dimension finds support in the other measures, we decided to measure PCIS with single-component structures for both topics in question[6].

Table 2 shows the results of single-component principal components analyses for both "university course" and "job". The factor loadings for "job" had a minimum of .51, and for "university course" the minimum was .59. Additionally, the order with which item loadings decrease for each topic is the same. Such evidence points out to a fair adequacy of the model with only one component. The results of Cronbach's alpha were also satisfactory: .76 for both.

Table 2. Factor loadings from the principal component analyses of measures of perceived collective involvement of university students – PCIS – with "university course" and "job".

Item	University course	Job
connection	.74	.78
value	.70	.76
important	.69	.71
affects	.67	.69
significant	.67	.65
depends	.59	.51

After making sure that the measurement with the proposed scales is appropriate, it is possible to assess the relations of personal involvement, PCIS and group identification. The model related to the topic "university course" shall be dealt with first. The three variables (PCIS, PI and group identification) had high mean scores, indicating a sample of participants who were highly identified with the university students' group, personally involved with the topic university course and perceiving other students as also being involved with it [M_{GI} (Group identification) = 6.14; SD_{GI} = .93; M_{PCIS} = 5.96, SD_{PCIS} = .86; M_{PIn} (Personal involvement) = 5.66; SD_{PIn} = .97]. The three variables are correlated at $p < .001$ ($r_{GI,PCIS}$ = .29; $r_{GI,PIn}$ = .41; $r_{PCIS,PIn}$ = .37).

The linear model concerning PCIS and group identification as predictors and personal involvement as the criterion variable was significant ($F_{2, 399} = 61.4$, $p < .001$; R^2 = .23), as was the model that added an interaction term of the two centered predictors ($F_{3, 398} = 44.8$, $p < .001$; R^2 = .25). A comparison of the two models indicated that the interaction model explained the criterion better ($F_{1, 398} = 8.9$, p = .002). The coefficients relative to such model are presented in the upper part of Table 3. Both PCIS and group identification are positively related to personal involvement with the university course. Additionally, simple slope analysis (Aiken & West, 1991) indicates that participants with high group identification have a stronger relationship between PCIS and their own personal involvement with the topic [b = .45, SE = .07, $t(398)$ = 6.51, $p < .001$], whereas low identifiers' personal involvement does not increase as much when their PCIS scores rise [b = .17, SE = .07, $t(398)$ = 2.46, p = .01] (see left section of Figure 1).

Table 3. Coefficients, standard errors and statistical tests of regression predictors for the interaction models.

Predictors – University course	*b*	SE	*t*	*p*
(Intercept)	5.62	.05	128.81	< .001
PCIS	.31	.05	6.11	< .001
Group identification	.37	.05	7.68	< .001
PCIS × Group identification	.15	.05	3.00	= .003
Predictors – Job	***b***	**SE**	***t***	***p***
(Intercept)	5.14	.05	99.40	< .001
PCIS	.37	.05	6.77	< .001
Group identification	.14	.06	2.60	= .01
PCIS × Group identification	.12	.05	2.43	= .02

In terms of the results concerning the "job" topic, the same global patterns were found: high scores (M_{GI} = 6.01, SD_{GI} = .98; M_{PCIS} = 5.70, SD_{PCIS} = .95; M_{PIn} = 5.18; SD_{PIn} = 1.07) and mutual correlations at p < .001 ($r_{GI,PCIS}$ = .33; $r_{GI,PIn}$ = .21; $r_{PCIS,PIn}$ = .36). Both the linear additive model with PCIS and group identification as predictors $F_{2, 400}$ = 32.4, $p < .001$; R^2 = .14) and the model adding their interaction term ($F_{3, 399} = 23.8$, $p < .001$; R^2 = .15) were significant, but the latter explained a bit more of more personal involvement variance ($F_{2, 400} = 5.9$, p = .02).

The coefficients from Table 3 also correspond to the patterns observed previously with "university course": both PCIS and group identification have a positive relationship with personal involvement with the job topic. As shown on

[6] An alternative course of action might be to fit confirmatory factor analysis models, as if verifying if single-factor measures are suitable choices for the constructs. With the aid of the R library lavaan (Rosseel, 2012), we obtained the following measures of model fit for single-factor models of personal involvement: "university course": CFI = .97; TLI = .94; RMSEA = .07 (90% CI .04 - .10); SRMR = .04; "job" (with residual covariances according to modification indices): CFI = .99; TLI = .97; RMSEA = .05 (CI 90% .01 - .11); SRMR = .02. The model fit results for perceived collective involvement were: "university course" (with residual covariances according to modification indices): CFI = .99; TLI = .98; RMSEA = .04 (CI 90% .01 - .11); SRMR = .014; "job" (with residual covariance between items *PCIS-value* and *PCIS-important*): CFI = .97; TLI = .95; RMSEA = .06 (CI 90% .03 - .10); SRMR = .04. We therefore reach the same basic conclusion from the principal components analyses: it is possible to treat the involvement construct one-dimensionally, but the fit is not perfect straight away, demanding some adjustments in terms of error correlations.

the right section of Figure 1, the single slope analysis indicates that the interaction has a subtle effect, suggesting a slightly stronger relationship between PCIS and personal involvement with job for high identifiers [b = .49, SE = .07, $t(399)$ = 6.59, p < .001] than for low identifiers [b = .25, SE = .07, t = 3.46, p < .001.

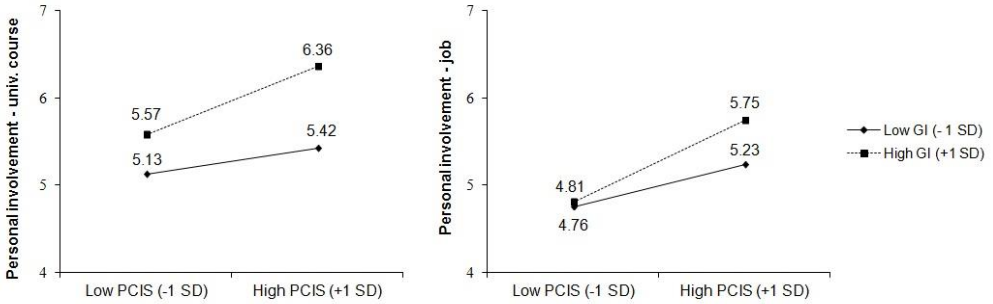

Figure 1. Simple slopes plots to assess the interaction effects of group identification and PCIS to explain personal involvement with the two social objects.

Discussion

Starting from a triadic conception (Ego-Alter-Object) that, according to Moscovici, is foundational for social psychology, this paper aimed at transposing that look to characterize the relationships linking individual and group in the context of the involvement with a social object. According to a more sociological view of the individual – group relationship, it was expected that the individual perception of group involvement with social objects would predict the individual involvement of a group member. It was also expected that group identification would strengthen that relationship. A study conducted with Brazilian university students based on questionnaires that assessed the students' own involvement and their perception of the involvement of university students in general with two topics that are relevant in university life. The results support our hypotheses. The relationship of PCIS with personal involvement is coherent with Rouquette's assumption that personal involvement is socially determined (Gruev-Vintila & Rouquette, 2007). Indeed it is only logical that a source of such determination is the ingroup, which in this case is the university students' group. The specification of an influence of group involvement in personal involvement has been explicitly mentioned by other authors working in the field of social thinking, such as Gurrieri *et al.* (2007).

The positive relationship of group identification with the criterion variable is also justified by the high stake values (Moliner, 1993) of the studied social objects for the university students' group. "University course" is a topic that has a structural relationship with such group; it practically defines group identity. "Job" presents a challenge that students will soon be facing, which is why they express high concern with such topic. The close relationship of the two themes with the symbolic universe associated with university students would explain that students that are highly identified with their group pay more attention to issues that are highly central to the identity of that group, which would in turn explain a positive correlation between group identification and personal involvement with those topics.

The interaction effect between group identification and perceived collective involvement completes the triangle with perceived collective involvement, personal involvement and group identification. The results resemble the past effects found in the literature: group identification playing a role in modulating the influence of perceptions of group culture and norms and a transfer to individual thinking and action. However, the very small effect observed with the "job" object suggests that the moderation does not always take place. In another study on personal involvement, Lheureux *et al.* (2011) already raised the argument that correlation patterns might be specific to particular population-object configurations. How to explain different patterns of results that supposedly reflect the same processes? At this point, one needs a theory of possible relationships between populations and social objects, including typologies of cases and their conditions of existence. Efforts in the field of social knowledge in this direction are still incipient. Rouquette (2005) identified three possible hierarchical relationships of objects and groups, according to their congruence, from strongest to weakest. The strongest ones comprise the situations in which the group is defined by or depends on the object completely. An intermediate situation deals with the case in which the object is a consequence or a correlate of the group. Finally, the weakest congruence is a mere contingent relationship, in which objects and groups can be replaced by others without much importance. According to this classification, we might consider "university course" as an object that has strong congruence with the students group, whereas "job" indicates medium congruence. Perhaps that property might justify the small effect that was observed, which would lead us to believe that stronger group-object relationships are the ones that would be compatible with the triangular relationship that inspired the model investigated in this study. Nevertheless, if the processes that link involvement and group identification are object-dependent, i.e., dependent on characteristics of social

objects and the stakes that they engender, then theoretical advance in such direction is a necessity.

Another point that raises attention is the proportion of personal involvement variance explained by the tested models. They represent one fourth of the variance of the personal involvement with university course and only 15% of the involvement with job. That is far from supporting a strong conception of social determination of personal involvement. But a single set of relations linking group identification and collective involvement is unlikely to be able to explain a large proportion of an individual's personal involvement with a group. Social identity processes are complex; everyone is affiliated to various social groups (Tajfel, 1973) which can and do have simultaneous effects on individual-level processes. When commenting on the relationship between group knowledge (social representations) and individual action, Breakwell (1993, p. 16) alerted that: "The major problem in explaining, worse still predicting, individual action in any particular situation lies in the fact that the person will be characterized by several social identities and their attendant social representational baggage at the time." What is more, the author reminds us that the contributions of group affiliations are not separate: they interact. Individuals actualize diverse combinations of socialization forces that lead to particular outcomes. Milland (2001) found that the perceived normative references that university students and young graduates attribute to their parents, peers and teachers jointly contribute to explain their beliefs about unemployment and work. The same, arguably, happens with personal involvement. In all probability, the social determination of the force of connection between a person and a social issue or topic depends on situational constraints, subjective history, and many social identities and their interacting combinations. So it is in such context that the results of the reported study must be considered: a fraction of personal involvement with a social object was consistently explained from a single group sphere in terms of perceived collective involvement with the topic in question and group identification. But in order to be able to explain more precisely the involvement construct, one will need to refine models and include more pertinent group realities and other social psychological processes, other than develop a basis to identify social object stakes in terms of what they mean for groups and what the consequences of such stakes for personal and collective involvement are.

One point that might stimulate discussion is also the choice to measure involvement as a single component. Of course, we lose in refinement when unable to identify specific aspects related to each involvement dimension. But at the same time, there is a gain in parsimony. The consideration of only one dimension is also supported by the results of principal components analysis, correlations and reliability indexes, and is supported by current literature (Demarque *et al.*, 2011). Moreover, if component structure results are approximately replicated with other objects, the psychometric scale that was employed could prove itself useful in other research projects, due to its advantageous (small) size and associated respondent burden, and positive parameters.

Overall, if the contribution of this study can be summarized in a few words, it probably lies in the rescue of a traditional, classical definition of social psychology and the gathering of some evidence that illustrates that the logic that is essential to that model finds empirical support in correlational data related to one social psychological construct – involvement – that fits well with the concerns of relationships among the individual, a reference group and a social object. Finally, Moscovici's triangle is a frame that can be adapted to and guide research on various processes connecting the individual and collective spheres. For instance, it can probably help to organize inquiries on the relationships of social, normative knowledge with personal knowledge (Wachelke, 2012a), or the relations between social representations on individual representations and actions (Wagner, 1994, 1995). The identification of elements related to the three vertexes of the triangle – Ego, Alter, Object – can help to situate a project within the field of social psychology, a discipline that has the curious position of having per object the relationship between levels of explanation. A focus on the articulation of such levels was precisely the focus of Moscovici when he proposed that singular model, a reading grid that can help avoiding emphasizing only one side of the coin: psychologism or sociologism. In the reported investigation, we were inspired by such model in order to make sense of the relationship of group and individual spheres in one particular direction and with one central construct, but we believe that similar perspectives can prove to be fruitful with other constructs and processes, and that the effort to classify variables, constructs and relationships within the frame of the terms of the triangle can help to reinforce the distinguishing social psychological nature of any investigation in the field.

Note.- Funding by Brazil's National Council of Scientific and Technological Development (CNPq).

References

Abric, J.-C. (1987). *Coopération, competition et représentations sociales*. Cousset: DelVal.

Aiken, L.S., & West, S.G. (1991). *Multiple regression: testing and interpreting interactions*. Newbury Park: Sage.

Allport, G.W. (1954). The historical background of social psychology. In G. Lindzey, (ed.), *Handbook of Social Psychology, v. 1* (pp. 3-56). Reading: Addison-Wesley.

Arcuri, L., & Castelli, L. (2000). *La cognizione sociale. Strutture e processi di rappresentazione*. Roma, Bari: Laterza.

Bhowon, U., & Tseung-Wong, C.N. (2004). Group identification as a multidimensional construct: the case of ethnicity. *IFE Psychologia, 12*, 97-98. doi:10.4314/ifep.v12i2.23646

Bouas, K.S., & Arrow, H. (1996). The development of group identity in computer and face-to-face groups with membership change. *Computer Supported Cooperative Work, 4*, 153-178. doi:10.1007/BF00749745

Breakwell, G.M. (1993). Social representations and social identity. *Papers on Social Representations, 2*, 198-217.

Demarque, C., Lo Monaco, G., Apostolidis, T., & Guimelli, C. (2011). Implication personnelle et extension temporelle future: quelques éléments pour une contextualisation du rapport au temps. *Cahiers Internationaux de Psychologie Sociale, 92*, 354-369.

Doise, W. (1982). *L'explication en psychologie sociale*. Paris: PUF.

Duckitt, J., Callaghan, J., & Wagner, C. (2005). Group identification and outgroup attitudes in four South African ethnic groups: a multidimensional approach. *Personality and Social Psychology Bulletin, 31*, 633-646. doi:10.1177/0146167204271576

Enzmann, D. (1997). RanEigen: a program to determine the parallel analysis criterion for the number of principal components. *Applied Psychological Measurement, 21*, 232. doi:10.1177/01466216970213003

Ernst-Vintila, A. (2009). Le rôle de l'implication personnelle dans l'expression de la pensée sociale sur les risques. In M.-L. Rouquette (ed.), *La pensée sociale: perspectives fondamentales et recherches appliqués* (pp. 159-187). Toulouse: Érès.

Farr, R. (1994). Attitudes, social representations and social attitudes (discussion of C. Fraser). *Papers on Social Representations, 3*, 1-4.

Fisher, R.J., & Wakefield, K. (1998). Factors leading to group identification: a field study of winners and losers. *Psychology , & Marketing, 15*, 23-40. doi:10.1002/(SICI)1520-6793(199801)15:1<23::AID-MAR3>3.0.CO;2-P

Fiske, S.T., & Taylor, S.E. (1991). *Social cognition. 2nd ed.* New York: McGraw-Hill.

Flament, C., & Rouquette, M.-L. (2003). *Anatomie des idées ordinaires*. Paris: Armand Colin.

Garcia-Marques, L. (2000). O inferno são os outros: o estudo da influência social. In J. Vala, M.B. Monteiro (eds.), *Psicologia social* (pp. 227-292). Lisboa: Calouste Gulbenkian.

Gruev-Vintila, A., & Rouquette, M.-L. (2007). Social thinking about collective risk : how do risk-related practice and personal involvement impact its social representations? *Journal of Risk Research, 10*, 555-581. doi:10.1080/13669870701338064

Guimelli, C. (1999). *La pensée sociale*. Paris: PUF.

Guimelli, C. (2002). Étude expérimentale du rôle de l'implication de soi dans les modalités de raisonnement intervenant dans le cadre des représentations sociales. *Revue Internationale de Psychologie Sociale, 16*, 129-161.

Guimelli, C., & Abric, J.-C. (2007). La représentation sociale de la mondialisation: rôle de l'implication dans l'organisation des contenus représentationnels et des jugements évaluatifs. *Bulletin de Psychologie, 60*, 49-58. doi:10.3917/bupsy.487.0049

Guimond, S. (2000). Group socialization and prejudice: the social transmission of intergroup attitudes and beliefs. *European Journal of Social Psychology, 30*, 335-354. doi:10.1002/(SICI)1099-0992(200005/06)30:3<335::AID-EJSP994>3.0.CO;2-V

Gurrieri, C., Wolter, R.P., & Sorribas, E. (2007). L'implication personnelle: un outil psychosocial pour comprendre le lien population-objet. *Psicologia em Estudo, 12*, 423-432. doi:10.1590/S1413-73722007000200024

Hogg, M.A. (2006). Social identity theory. In P.J. Burke (ed.), *Contemporary social psychological theories (*pp. 133-157). Palo Alto: Stanford University Press.

Hogg, M.A., & Abrams, D. (1988). *Social identifications: a social psychology of intergroup relations and group processes*. Londres: Routledge , & Kegan Paul.

Horn, J.L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika, 30*, 179-185. doi:10.1007/BF02289447

Jetten, J., Spears, R., & Manstead, A.S.R. (1997). Strength of identification and intergroup differentiation: the influence of group norms. *European Journal of Social Psychology, 27*, 603-609. doi:10.1002/(SICI)1099-0992(199709/10)27:5<603::AID-EJSP816>3.0.CO;2-B

Jetten, J., Postmes, T., & McAuliffe, B.J. (2002). 'We're all individuals': group norms of individualism and collectivism, levels of identification and identity threat. *European Journal of Social Psychology, 32,* 189-207. doi:10.1002/ejsp.65

Kaiser, H.F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement, 20*, 141-151. doi:10.1177/001316446002000116

Katz, D., & Allport, F.H. (1931). *Student attitudes*. Syracuse: Crasftsman.

Kiesner, J., Cadinu, M., Poulin, F., & Bucci, M. (2002). Group identification in early adolescence: its relation with peer adjustment and its moderator effect on peer influence. *Child Development, 73*, 196-208. doi:10.1111/1467-8624.00400

Leach, C.W., van Zomeren, M., Zebel, S.Z., Vliek, M.L.W., Pennekamp, S.F., Doosje, B., Ouwerkerk, J.W., & Spears, R. (2008). Group-level self-definition and self-investment: a hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology, 95*, 144-165. doi:10.1037/0022-3514.95.1.144

Lheureux, F., Lo Monaco, G., & Guimelli, C. (2011). Entre représentations sociales et intentions de pratiques: l'implication. *Interamerican Journal of Psychology, 45*, 61-76.

Milland, L. (2001). *De la dynamique des rapports entre représentations sociales du travail et du chômage*. Doctoral Thesis in Psychology. Université de Provence, Aix-en-Provence.

Moliner, P. (1993). Cinq questions à propos des représentations sociales. *Cahiers Internationaux de Psychologie Sociale, 20*, 5-52.

Moliner, P. (2001). Consensus manifestes, consensus latents et consensus illusoires. *Cahiers Internationaux de Psychologie Sociale, 49*, 114-122.

Moscovici, S. (1982). The coming era of representations. In J.P. Codol, J.P. Leyens (eds.), *Cognitive approaches to social behaviour* (pp. 115-150). La Haye: M.Nijhoff.

Moscovici, S. (1984). Introduction: le domaine de la psychologie sociale. In S. Moscovici (ed.), *Psychologie sociale* (pp. 5-20). Paris: PUF.

R Core Team (2013). *R: a language and environment for statistical computing*. Vienna: R Foundation for Statistical Computing.

Rosseel, Y. (2012). lavaan: an R package for structural equation modeling. *Journal of Statistical Software, 48*, 1-36.

Rouquette, M.-L. (1988). *La psychologie politique*. Paris: PUF.

Rouquette, M.-L. (1996). *La communication sociale*. Paris: Dunod.

Rouquette, M.-L. (1997). *La chasse à l'immigré: violence, mémoire et représentations*. Liège: Mardaga.

Rouquette, M.-L. (2005). *Sur la congruence entre l'Objet, la Population et la Méthode*. Conference presented at the IV Jornada Internacional e II Conferência Brasileira sobre Representações Sociais, João Pessoa, Brazil.

Tajfel, H. (1972). Some developments in European social psychology. *European Journal of Social Psychology, 2*, 307-322. doi:10.1002/ejsp.2420020307

Tajfel, H. (1973). La catégorisation sociale. In S. Moscovici, S. (ed.). *Introduction à la psychologie sociale, v. 1* (pp. 272-302). Paris: Larousse.

Terry, D.J., & Hogg, M.A. (1996). Group norms and the attitude-behavior relationship: a role for group identification. *Personality and Social Psychology Bulletin, 22*, 776-793. doi:10.1177/0146167296228002

Wachelke, J. (2012a). Representations and social knowledge: an integrative effort through a normative structural perspective. *New Ideas in Psychology, 30*, 259-269. doi:10.1016/j.newideapsych.2011.12.001

Wachelke, J. (2012b). Identificação com o grupo: adaptação e validação de uma medida geral para o contexto brasileiro. *Psicologia e Saber Social, 1*, 187-200.

Wachelke, J., Demantova, A., & Guisso, L. (2012). An exploratory study of the perception of ingroup communication relative to social representation objects. *Psychology of Language and Communication, 16*, 201-211.

Wagner, W. (1994). Fields of research and socio-genesis of social representations: a discussion of criteria and diagnostics. *Social Science Information, 33*, 199-228.

Wagner, W. (1995). Description, explanation and method in social representation research. *Papers on Social Representations, 4*, 156-176. doi:10.1177/053901894033002004

(Article received: 24-11-2013; revised: 07-11-2014; accepted: 21-11-2014)