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BIODIVERSITY CONSERVATION IN THE COMMUNITY

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Self-Other relations in biodiversity conservation in the community: representational processes and adjustment to new actions

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Abstract

This research explores the simultaneous role of two Self-Other relations in the elaboration of representations at the micro- and ontogenetic levels, assuming that it can result in acceptance and/or resistance to new laws. Drawing on the Theory of Social Representations, it concretely looks at how individuals elaborate new representations relevant for biodiversity conservation in the context of their relations with their local community (an interactional Other) and with the legal/reified sphere (an institutional Other). This is explored in two studies in Portuguese *Natura* 2000 sites where a conservation project calls residents to protect an at-risk species. Study 1 shows that (1) agreement with the institutional Other (the laws) and meta-representations of the interactional Other (the community) as approving of conservation independently help explain (at the ontogenetic level) internalization of conservation goals and willingness to act; (2) the same meta-representations operating at the micro-genetic level attenuate the negative relation between ambivalence and willingness to act. Study 2 shows that a meta-representation of the interactional Other as showing no clear position regarding conservation increases ambivalence. Findings demonstrate the necessarily social nature of representational processes and the importance of considering them at more than one level for understanding responses to new policy/legal proposals.

Keywords: social representations; social norms; personal norms; biodiversity protection; environmental laws; legal innovation; ambivalence;

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Numerous countries around the world, including European Union (EU) member-states, rely today on treaties, laws and regulations as core instruments for tackling the global goals of climate change adaptation, resource conservation or biodiversity protection (Beck, 2009; Castro, 2012; Dunlap, 2008; Giddens, 2009; Turnhout, Behagel, Ferranti, & Beunen, 2014). Despite supra-national and national reach and interest, these legal instruments are often entirely dependent upon local implementation in specific places and concrete communities (Castro & Mouro, 2011). This is especially the case in the EU biodiversity legislation that created the extensive network of protected sites known as *Natura 2000*, during the first decade of this century. The designation of the *Natura* sites resulted in the launching of numerous in-site conservation projects and management plans, and in the creation of local biodiversity offices, all proposing a re-fashioning of local activities (Castro & Mouro, 2011). This has made processes of elaboration and translation of the new laws across spheres central for the local communities: the new legal/reified meaning originating in the institutional sphere has to be translated to the local consensual universe (Moscovici, 1961/1976), and integrated into everyday actions relevant for the conservation of the at-risk habitats and species (Castro & Mouro, 2011).

Although these processes, involving individual, community and institutional transformations, happen at various levels and involve a time dimension, they have not often been analysed as such. Studies have either privileged the individual level (Johansson & Henningson, 2011; Thogersen, 2006), or explored exclusively institutional aspects (Turnhout *et al.*, 2014). The need thus remains to develop a more integrated understanding about the psycho-social dynamics interplaying across these various levels, illuminating how individuals and their communities as sites of everyday interaction together elaborate - and come in time to accept – the new representations

that are institutionally proposed. Moreover, the processes through which the elaboration of meaning may equally result in contestation, and doubt and ambivalence regarding the new proposals are also under-researched. In order to tackle these lacunae, the present research draws on the Theory of Social Representations (TSR) for exploring in two studies how communities living in two *Natura* sites in the interior south of Portugal deal with the proposals for protecting a local at-risk species, the Black Vulture, as these are defined by a conservation project active in the region. The first study addresses how representations of the laws and community norms, as well as ambivalence, affect willingness to act in conservation-relevant ways. The second study explores whether representations of the community (as having consensual or diverse opinions regarding the conservation of the vulture) affect ambivalence as an indicator of resistance to change.

1. The Theory of Social Representations: thinking with others

“It’s not just farmers and landowners that can make a difference. Because, if the community here likes the vulture, I, as a farmer, think twice before doing the wrong thing, because I feel I am being watched by others.” (Interview with Farmer, 2010)

Social representations can be defined as shared systems of meaning and action (Moscovici, 1961/1976; 1972). What makes the notion particularly distinctive is the fact that for TSR the triangle Self-Object-Other is the condition of emergence, elaboration and transformation of representations (Moscovici, 1972; Marková, 2003). This means that the relationship between Self and Object is thus not seen as direct, but as always mediated through Self-Other relations, or “through the intervention of another Subject” (Moscovici, 1972, p.107). Moreover, in this triangle, the Other can be the immediate,

proximal interlocutor of face-to-face interactions (Marková, 2003), which makes us “*think twice before doing the wrong thing*”, as referenced above; however, the Other can also be the more distal, institutional Other of the State/legal sphere (Elcheroth, Doise, & Reicher, 2011; Staerklé, Clémence, & Spini, 2011), capable of endowing certain representations with an accrued power for defining what is “*the wrong thing*” in a society (Castro, 2102).

This makes TSR a systematic approach (Moscovici, 1972) particularly suited for analysing the situation we find in protected sites, in which residents are called to elaborate new meaning and actions originating in legal/reified spheres (an institutional Other) in the context of their on-going relations with the local community (an interactional Other). In such a situation, Self-Other relations can either help new meaning and actions stabilize in a shared, consensual universe, stimulating representational change (Kadianaki & Gillespie, 2015), or encourage ambivalence and resistance, delaying or closing down change (Castro, 2012). In this regard, TSR has shown how when new Objects travel across spheres – from the scientific or the legal spheres to the consensual universe – a multiplicity of representations emerges in different groups (Jodelet, 1989; Moscovici, 1988). This multiplicity, in turn, can generate ambivalence, a delayer in adopting new actions (Castro, 2012). And it may also generate different velocities in the adjustment of new ideas to new actions, as old habits enacting a past collective memory may remain active for a long period of time, one of the central findings of TSR (Brondi, Sarrica, Cibir, *et al.*, 2012; Jodelet, 1989; also Bellelli, Curci & Leone, 2007; Doise, Spini & Clémence, 1999).

Also important is how the elaboration of new representations through Self-Other relations occurs at various levels (Doise *et al.*, 1999; Duveen & Lloyd, 1990). At the interpersonal, interactional, *micro-genetic* level, this elaboration is dependent upon the

communicative practices through which we become aware of the perspective of the Other (Devine-Wright, 2009; Kadianaki & Gillespie, 2015). Communicative practices (e.g., conversing and debating with others, but also making inferences about what they approve, and paying attention to how they act) are crucial for the “calibration of minds” (Wagner, 1998) involved in social representation and for (some) representations to become shared normative beliefs. Through these communicative practices we reach for the Other, and develop “meta-knowledge” or “meta-representations” (Elcherohr *et al.*, 2011) about what the Other knows, does, thinks, or approves. For TSR this reflexive capacity to operate with meta-“knowledge of other minds” is a central guide to meaning-making processes (Elcherohr *et al.*, 2011, p.739; Wagner, 1995). These “meta-representations” are also deemed crucial by approaches to norms and social influence (Cialdini, Reno, & Kallgren, 1990). Notably, the norms literature focuses on the distinction between meta-representations of what the Other approves (i.e., injunctive normative beliefs) and meta-representations of what she does (i.e., descriptive normative beliefs), showing these may play different roles in the elaboration of representations and actions (Cialdini *et al.*, 1990; see also Brondi *et al.*, 2012; Castro *et al.*, 2009).

Elaboration happens also at the ontogenetic level (Kadianaki & Gillespie, 2015). This level concerns the processes through which the social enters self-identity, and Self-Other relations are productive of subjectivities (Castro, 2012). These are, thus, the processes linked to internalisation, which assure that “there is no cut between the individual and the collective” (Moscovici, 1988). It is also at this level that encounters with the diversity of representations of the Other can enhance reflexive awareness (Bauer & Gaskell, 1999; Kadianaki & Gillespie, 2015), provoking doubt (Duveen, 2002), or ambivalence (Castro *et al.*, 2009).

Based on these premises, we present two studies resulting from a survey conducted in *Natura 2000* communities. Study 1 explores how the relations with (a) the interactional Other of the community and (b) the institutional Other proposing the law intervene in the internalisation of conservation goals and intentions to act in conservation-relevant ways. Study 1 also examines whether Self-Other relations attenuate the negative relation between ambivalence and intention to act. In addition to this, Study 2 investigates how a “meta-representation” of the community (the interactional Other) as showing consensual or diverse opinions regarding the conservation of the vulture affects ambivalence.

In sum, we take to empirical scrutiny the question of how representational processes unfolding at different levels (micro and ontogenetic) and within the relationships with two different Others (interactional and institutional) affect acceptance of and resistance to the proposals of the legal sphere. A few studies have looked at how community norms can affect support and opposition to laws (Mouro & Castro, 2012; Sarrasin, Green, Fasel *et al.*, 2012), yet there is still need for a systematic examination of how these processes relate to willingness to act in biodiversity conservation. We now present the studies in sequence.

2. Study 1 – laws, norms and biodiversity conservation actions

The conservation of at-risk local species is one of the main goals of the *Natura 2000* network of protected sites, which represents today 18% of the area of the 27 EU Member States. *Natura* sites are governed by specific legislation, translated to local practices through various mediating systems (Castro & Mouro, 2011), conservation projects among them. The present article results from our partnership in one such a

project, specifically targeting the Black Vulture (LPN, 2012), now breeding again in Portugal after national extinction in the 1970s.

One of the goals of the project (2010-2014) was to set down new actions able to reduce the threats to this species in two Natura sites in the interior south of Portugal. From the residents' perspective, some of these actions are "actions of the project", *i.e.* actions defined by conservationists that they, as residents, can support or oppose (or even boycott). The first two "actions of the project" defined by the conservationists were the construction of artificial nests and the creation of feeding fields for vultures, to be placed on both public and private lands.

Other actions can be directly carried out by residents. These can include communicating, in routine conversations, support for the protection of the vulture and approval of conservation projects in local lands. Such communicative practices – here called "actions of Self" – are vital for opening space for change in the community by expressing the extent to which the "community *here likes the vulture*", as articulated by the interviewee quoted above. They enable the elaboration of meta-representations about the community and about species' conservation as a new goal.

For understanding willingness to act in ways relevant for the conservation of the vulture in the context above described we will thus consider distinct Self-Other relations and different levels of representational processes. We will explore whether the laws, expressing what the institutional Other of our nation (Staerklé *et al.*, 2011) approves, meet with personal agreement or disagreement, and how this dimension affects willingness to act. We will also examine the role played by informal norms prevalent in the community (the interactional Other) and which are inferred, at the micro-genetic level, from communicative practices and actions.

As pointed out, the meta-representations these inferences produce can regard both what the community is seen to do and what it is seen to approve – descriptive and injunctive normative beliefs, respectively (Cialdini *et al.*, 1990). Evidence shows that both are relevant for explaining conservation behaviours (Gockeritz, Rendon, Schultz *et al.*, 2010; Thøgersen, 2006); we will thus consider both and the agreement with the institutional Other when examining predictors to the intention to act in pro-conservation ways. Assuming these representational processes unfold simultaneously at multiple levels, we expect both types of Self-Other relations (agreement with the laws and meta-representations of the community) to independently help explain willingness to get involved in *actions of the Self* and *actions of the Project*.

At the *ontogenetic level* (Duveen & Lloyd, 1990), we will look at how the perspectives of the institutional *and* the interactional Others are internalised as personal norms, *i.e.*, become integrated into the Self (Castro *et al.*, 2009), and what are the consequences of internalisation for intentions to act. In this regard, evidence shows that personal norms are positively related to intentions to recycle (Castro *et al.*, 2009; Thøgersen, 2006), avoid breaking environmental laws (Hernández *et al.*, 2010) or support biodiversity protection (Johansson & Henningsson, 2011), thus we expect a similar finding in our research. Previous research also indicates that injunctive normative beliefs support the development of a personal pro-conservation norm (cf. Thøgersen, 2006); therefore in our study we expect personal norms will be explained by meta-representations of the community as approving the conservation of the vulture. Additionally, and indicating a process unfolding at multiple levels, agreement with the laws will also contribute to explain personal norms. In sum, we expect that, at the ontogenetic level, both the Other of the community and the institutional Other of the nation will contribute to the internalisation of (biodiversity conservation) new meaning.

However, encounters with the multiplicity of representations of the Other can also be a reflexive source of doubt (Duveen, 2002) or ambivalence (Castro *et al.*, 2009). These processes can foster a complex elaboration of meaning through which action is delayed (Castro *et al.*, 2009; Ojala, 2008), as corroborated by the fact that individuals report less ambivalence when the norms of a context clearly indicate an approved direction (Cavazza & Serpe, 2009). Therefore, this study also examines (1) whether ambivalence maintains a negative relationship with the willingness to adopt actions protective of the vulture and (2) whether a meta-representation of the community as approving of the conservation (injunctive normative beliefs) and agreement with the laws can attenuate this negative association, here taken as an indicator of resistance to change.

2.1 Method

Participants and procedure.

A representative sample of 300 residents in two *Natura* 2000 sites in the southern interior of Portugal responded to a questionnaire, applied in their homes by trained interviewers. Yet in order to ensure that responses were picking up on meaningful positions on the protection of the vulture, the present study only reports answers of residents who declared being aware of the existence of black vultures in their region (44% of total sample, $N=132$). In this sub-sample, residents were 56.8% men, 52.3% employed and the mean age was 51.5 ($SD=18.7$; $Min.=18$, $Max.=86$).

Variables.

Descriptive normative beliefs were assessed by two items (Gockeritz *et al.*, 2010):

“In your community, how many people engage in behaviour that helps protect the black

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vulture?"; "How many of the people important to you engage in behaviour that helps protect the black vulture?" (scale: 1-*none*, 5-*all*; $r=.65$, $p<.01$; $M=2.2$; $SD=0.60$).

Injunctive normative beliefs were assessed by two items (Gockeritz *et al.*, 2010): "In my community, people think one should protect the black vulture"; "People important to me think one should protect the black vulture" (scale: 1-*totally disagree*, 5-*totally agree*; $r=.54$, $p<.01$; $M=3.4$; $SD=0.84$).

Agreement with the biodiversity laws was measured by two items: "Do you agree with the existence of protected sites regulated by biodiversity conservation laws *in this country?*; [...] *in this community?*"; "I am prepared to demand even more stringent biodiversity conservation laws for *this community*" (scale: 1-*totally disagree*, 5-*totally agree*; $r=.85$, $p<.000$; $M=4.1$; $SD=0.91$).

Personal norm was measured by two items (Castro *et al.*, 2009): "I like to think of myself as someone who is personally engaged in the protection of the black vulture"; "Biodiversity protection is for me a serious personal commitment" (scale: 1-*totally disagree*, 5-*totally agree*; $r=.35$, $p<.01$; $M=3.5$; $SD=0.86$).

Attitude towards the protection of the vulture in the community was adapted from Poortinga and Pidgeon (2006). Participants indicated which of the following four options better described their position: 1 - "it is important to support the protection of the black vulture in this community" (*pro-conservation*); 2- "it is important to contest the protection of the black vulture in this community" (*anti-conservation*); 3 - "there are good reasons for both supporting and contesting the protection of the black vulture in this community" (*ambivalent*), 4 - "I don't care whether the protection of the black vulture in this community is supported or contested" (*indifferent attitude*). Overall, 59.1% of the participants choose the pro-conservation position ($N=78$), 28.8% the ambivalent ($N=38$), 7.6% the indifferent ($N=10$) and 4.5% the anti-conservation ($N=6$).

Due to the small number of those choosing the last two positions, these were not considered for further analysis.

Actions of Self were assessed with three items: “I am willing to publicly defend, in conversations with friends and acquaintances, the importance of protecting the black vulture”; “I am willing to publicly criticize local co-residents whose actions are prejudicial to the black vulture”; “I support projects aimed at conserving the black vulture in our region” (scale: 1-*not at all*, 5-*very much*; $\alpha=.83$; $M=3.4$; $SD=0.91$).

Actions of the Project were assessed with two items: “I support the placement of artificial nests for the black vulture on local lands”; “I support the construction in our region of feeding spots for black vultures where carcasses of domestic and wild animals are placed” (scale: 1-*totally disagree*, 5-*totally agree*; $r=.52$, $p<.01$; $M=3.9$; $SD=0.85$).

2.2. Results

The relationships between norms and actions.

A multiple regression analysis was performed to examine the role played by meta-representations of the community (descriptive and injunctive) and agreement with the laws on willingness to act for biodiversity conservation. Results show that when we consider simultaneously the role of relations of the Self with the interactional Other (expressed in the normative beliefs) and with the institutional Other (expressed in the agreement with the laws), only the latter is significantly associated with willingness to engage in actions relevant for the protection of the vulture (Table 1). Also significant in this analysis is the role played by the internalization of biodiversity conservation concerns into a personal norm. This model accounts for 38% of explained variance for actions of the Project, and 39% for actions of Self, indicating a very similar pattern of results for both types of actions here analysed.

Table 1. Self-Other processes intervening in willingness to act

	<i>Actions of the Project</i>	<i>Actions of Self</i>
	$F(4,127)=21,194^{**}$	$F(4,127)=22,021^{**}$
Descriptive normative beliefs	-.16*	.02
Injunctive normative beliefs	.13	.14
Agreement with the laws	.26**	.19*
Personal norm	.39**	.46**
	$Adj.R^2=.38$	$Adj.R^2=.39$

** $p<.01$ * $p<.05$; values in columns are standardized.

A second regression analysis examined whether what Others in the community approve and do, as well as agreement with the institutional Other, are relevant for elaborating and internalising new norms. Table 2 shows that the personal norm is in fact strongly associated with the injunctive normative beliefs and with the agreement with the laws, but not with the descriptive normative beliefs. This model accounts for 33% of the explained variance of internalization.

Table 2. Self-Other processes intervening in the internalization of biodiversity conservation as a personal norm

	$F(3,128)=22,779^{**}$
	$Adj. R^2=.33$
Descriptive normative beliefs	.01
Injunctive normative beliefs	.42**
Agreement with the laws	.35**

** $p<.01$ * $p<.05$; values in columns are standardized.

Ambivalence and actions.

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An *ANOVA* was performed to show whether or not ambivalence was associated with a lower willingness to engage in actions relevant for the protection of the vulture (Table 3, Step 1). This analysis shows indeed that pro-conservation residents are more willing to engage in Actions of Self ($F=14.292^{**}$) and to support Actions of the Project ($F=13.169^{**}$) than ambivalent residents.

Next, three *ANCOVAS* were performed with the normative beliefs as covariates in order to examine whether or not normative beliefs attenuate the negative association of ambivalence and willingness to act. The first *ANCOVA* shows that the (negative) association of ambivalence with willingness to act is in fact weaker when the injunctive normative beliefs enters the model, and the second *ANCOVA* shows that this does not happen for the descriptive normative beliefs. The last *ANCOVA* shows that agreement with the law strongly reduces the (negative) association of ambivalence with both actions of Self and actions of the Project.

Table 3. The relation of ambivalence and willingness to act – with normative beliefs as covariates

	<i>Actions of the Project</i>	<i>Actions of Self</i>
Non-ambivalent	4.22 (.80)	3.69 (.93)
Ambivalent	3.68 (.65)	3.05 (.66)
<i>ANOVA</i> –Ambivalence	$F(1,114)=13.169^{**}$ $Adj. R^2=.10$	$F(1,114)=14.292^{**}$ $Adj. R^2=.10$
<i>ANCOVA</i> 1–Ambivalence with Injunctive normative beliefs as <i>COV</i>	$F_{cov}(1,113)=4.674^*$ $F_{Ambivalence}(1,113)$ $=9.358^{**}$ $Adj. R^2=.12$	$F_{cov}(1,113)=9.311^{**}$ $F_{Ambivalence}(1,113)=9.409^{**}$ $Adj. R^2=.17$

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<p><i>ANCOVA 2</i>–Ambivalence with Descriptive normative beliefs as <i>COV</i></p>	<p>$F_{cov}(1, 113) = 1.351$ $F_{Ambivalence}(1, 113) = 11.663^{**}$ $Adj. R^2 = .10$</p>	<p>$F_{cov}(1, 113) = .936$ $F_{Ambivalence}(1, 113) = 15.075^{**}$ $Adj. R^2 = .10$</p>
<p><i>ANCOVA 3</i>–Ambivalence with agreement with the law as <i>COV</i></p>	<p>$F_{cov}(1, 113) = 29.426^{**}$ $F_{Ambivalence}(1, 113) = 3.198^{\dagger}$ $Adj. R^2 = .28$</p>	<p>$F_{cov}(1, 113) = 32.857^{**}$ $F_{Ambivalence}(1, 113) = 3.536^{\dagger}$ $Adj. R^2 = .30$</p>
<p>**$p < .01$ *$p < .05$ †$p < .10$</p>		

In sum, these analyses indicate that the negative association of ambivalence with willingness to act is attenuated by (injunctive) meta-representations of the community as pro-conservation, and by personal agreement with the laws. In other words, assuming that the interactional Other (the community) supports the conservation of the culture and holding personal agreement with the institutional Other (the conservation laws) are two representational processes that make it easier for the Self to advance in the same direction.

2.3 Discussion

Study 1 showed how agreement with the biodiversity laws – expressing the relation with the institutional Other – is an important factor for both the internalisation of new meaning and for willingness to act in ways relevant for the conservation of the culture. Importantly, although the (internalised) personal norm has the most relevant association with willingness to act, corroborating the literature (Johansson & Henningsson, 2011; Thøgersen, 2006), personal agreement with the law maintains an independent contribution in its presence. Also to be noted is that meta-representations of what the community approves (injunctive normative beliefs) also have a relevant role: in this

case, not directly for action, but for the internalisation of new meaning. The meta-representations of what the community does (descriptive normative beliefs) seem overall less relevant in this context.

In this sense, then, the results reveal the joint and independent contribution of two sources of pressure for change and elaboration of new meaning – the interactional Other of the community and the institutional Other of the nation (Staerklé *et al.*, 2011). Both are relevant for change to occur at the *ontogenetic* level, i.e., for the internalisation of norms. The personal alignment with what is proposed by the institutional Other is, in turn, very relevant for the intention to adopt new actions. These results offer evidence of the processes through which new meaning – in this case, meaning that has travelled from the reified/legal sphere to the consensual universe – is elaborated through the positions of Others in the community, comes to be shared and enters the Self. Importantly, they thus lend overall support to the notion that an environmental policy based on the issuing of laws can effectively encourage environmentally relevant change, and does so by putting into motion processes at the micro-genetic and ontogenetic levels.

Moreover, these findings indicate that both the injunctive meta-representation of the community and the agreement with the nation's laws attenuate the negative link between ambivalence and willingness to act; here, the descriptive meta-representation of the community had no effect. This indicates that not all meta-representations about the community work in the same way: in this case what the community is seen to approve of is more relevant than what the community is seen to do. In this situation, the low level of the descriptive normative beliefs ($M=2.2$) suggests that this result may be due to the fact that these new conservation actions may still have low visibility in the community, an issue that needs to be clarified in future studies.

These findings clearly demonstrate the importance of knowing more about how meta-representations of the positions of the community intervene for opening up or closing down support and resistance to new meaning and actions (Sarrasin *et al.*, 2012). Study 1 has illustrated some of the processes through which encounters with the Other can stimulate and support representational change, attenuating ambivalence. However, it is important to explore whether meta-representations of the positions of the community can also increase ambivalence, thereby contributing to delaying change (Castro, 2012). This is what Study 2 will do, by attempting to empirically illustrate one of the processes that make thinking “*necessarily social*” (Moscovici & Markova, 2000, p.249), showing how we indeed think with others.

3. *Study 2 – a social approach to ambivalence*

As mentioned, TSR has shown that when innovative ideas move across spheres in society, their communication generates a multiplicity of representations (Buijs *et al.*, 2012; Jodelet, 1989; Moscovici, 1988). TSR moreover demonstrates that, as different groups hold and communicate different, contrasting and contested representations, meta-representations about the level of consensus and approval these attain in their communities are also elaborated (Vala, Garcia-Marques, Gouveia-Pereira & Lopes, 1998; Wagner, 1995). These meta-interpretations may in some cases lead the Self to conclude that the diversity of representations in the community is wide enough to prevent a clear approved direction. In other words, meta-representations about Other-Object relations may indicate that a certain Object is controversial in the community (no clear shared approved or normative direction exists for it). This can enhance the reflexive elaboration of the Self, and thus, be a source of ambivalence (Castro *et al.*, 2009). This proposal offers a view of ambivalence as linked to the representations seen

to prevail in the community as a cultural and geographical place to which one is particularly attentive in processes of change in people-place relations (Devine-Wright, 2009). This study thus sees ambivalence as more than simply an intra-personal phenomenon and directs attention to its social dimensions and to how it links the individual and the collective.

In the *Natura* communities here studied, the biodiversity laws have indeed been topics of much debate (Mouro & Castro, 2012). This has highlighted the existence of areas of consensus, such as the relevance of protecting local species, and topics for which there is controversy, such as the concrete forms the protection should adopt. Several other studies have corroborated that the social representations about protected areas and species in local communities can indeed show similar patterns (see Buijs *et al.*, 2012). In this context, Study 2 was organized to examine whether a meta-representation of the community as harbouring a diversity of views would lead to accrued (experienced) ambivalence, when compared with a meta-representation of consensus.

3.1. Method

Procedure.

A factorial-survey approach was used. After all the questions analysed in Study 1 had been asked, a small text was read to respondents about the position of the community regarding the protection of the black vulture. Each participant heard only one version of the text: either one making salient the existence of consensus in the community ($N=127$) or one making salient the diversity of views ($N=121$). A third group of respondents was the control group ($N=53$), receiving no message.

The text was the following:

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*“Now that we are approaching the end of this questionnaire, we can tell you that other surveys in your community, as well as previous conversations with various groups, have provided us with information about how CONSENSUAL/DIVERSE the opinions are here regarding the vulture. In other words, people in your community have rather SIMILAR/DIFFERENT opinions regarding the protection of the vulture. In order to better understand the CONSENSUS /DIVERSITY of positions of the residents in this community, we are going to ask you just a few more questions about the vulture”.*¹

After hearing the text, the participants were asked to report their ambivalence towards protecting the vulture. As we were measuring ambivalence for the second time in the survey, we used a different measure. *Ambivalence regarding protecting the vulture* was thus assessed through the item: “Has it ever happened to you to sometimes be against and other times be in favour of conserving the Black Vulture in your community? (scale: 1-*it has never happened to me*, 5-*it happens very often*; $M=1.4$; $SD=0.5$).

3.2 Results

The level of ambivalence reported was affected by the description of the community ($F(2,112)=3.092$, $p<.05$), when controlling for previous ambivalence (measured in Study 1) as a covariate ($F_{cov}(1,112)=11,094$, $p<.01$). Residents in the consensus condition displayed lower levels of ambivalence ($M=1.42$) than those in the diversity condition ($M=1.84$). The control group score ($M=1.80$), was not significantly different from the other two conditions. In sum, this result offers evidence that when the

¹ To check whether or not the message was made clear for participants, we asked them to estimate the percentage of residents supporting the protection of the vulture using 0 to 100% scales. As expected, the participants in the consensus condition choose more the extreme points of the scales (0%-20% and 80-100%) than the participants in the diversity condition ($X^2(2)=5.429$, $p<.07$): 56.7% versus 43.0%, respectively.

interactional Other is not seen to show a clear (approved) direction at the micro-genetic level, this increases ambivalence, a process occurring at the ontogenetic level.

4. *General Discussion*

This article aimed to examine how new representations that are institutionally proposed to a community are elaborated at the micro-genetic and ontogenetic levels through two different Self-Other relations, and how this elaboration affects support for or resistance against new actions. The study took place in a context where new meaning originating in legal/reified spheres (an institutional Other) was being received and had to become integrated into the local consensual universe and into self-definitions (Kadianaki & Gillespie, 2015) through elaboration in Self-Other relations. Two *Natura 2000* sites provided the context for exploring how both the communicative practices with the interactional Other occurring at the micro-genetic level and the agreement with the institutional Other were contributing to the internalisation of new conservation meaning and to willingness to support the protection of an at-risk species, the Black Vulture.

The existence of laws suggested that personal agreement with them (*i.e.*, with the institutional Other) could be relevant for deciding to act, over and above informal norms, *i.e.* meta-representations of what the community approves (injunctive normative beliefs) and does (descriptive normative beliefs). Also, being a new phenomenon eliciting debate and having a multiplicity of representations, the new laws and the conservation practices they suggested were expected to generate ambivalence (Castro, 2012). Moreover, and also as a result Self-Other relations, a meta-representation of the community as lacking a consensual position was expected to be a source of ambivalence.

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These assumptions were tested in two studies. Study 1 showed the relevance of Self-Other relations with both the institutional and the interactional Other, and how both provided independent contributions for internalisation and willingness to act. When the Other is the community, meta-representations of what is approved (injunctive normative beliefs) are relevant for the internalisation of the new conservation meaning into a personal norm and for attenuating the negative association of ambivalence with willingness to act. This illustrates, on the one hand, how important it is to take into account the fact that residents are attentive to the positions of the interactional Other in their community (Devine-Wright, 2009; Göckeritz *et al.*, 2010).

On the other hand, meta-representations of what the community does (descriptive normative beliefs) were overall not very relevant in this context. This may result from the existence of laws (see Hernández *et al.*, 2010). However, a plausible alternative explanation also needs to be considered: the lesser importance of meta-representations of what the community does may be due to the fact that the conservation of the vulture was a recent goal and the nests and the “actions of the project” were new. Time, bringing familiarity to these innovations, may increase the role played by meta-representations of what the community is doing. This is to be evaluated in phase II of the study. This alternative explanation highlights once more the need to take into account the temporal dimension when examining change (Bellelli *et al.*, 2007), as ideas and actions may not be aligned in the same way in all stages of change (Bronchi *et al.*, 2012; Castro, 2012; Devine-Wright, 2009; Jodelet, 1989).

Study 1 also showed that when the Other is the institutional sphere, agreement with the laws plays a key role both in the internalisation of new conservation meaning and in willingness to act, offering a contribution that is independent of the one offered by the interactional Other. Finally, the fact that personal norms were shown in Study 1 to be

the best predictors of willingness to act suggests that they have a role in explaining not only law-breaking (Hernández *et al.*, 2010) but also law-abiding behaviour. On the whole, these conclusions both lend support to the idea that public policies supported by legal norms do play a role in changing representations, and suggest that studies attempting to understand the acceptance of new biodiversity actions in protected sites should not only explore informal norms (Johansson & Henningsson, 2011), but also assess agreement with the laws and policies that may be in place.

Study 2 explored Self-Other relations intervening at the ontogenetic level for affecting ambivalence, i.e. self-reflection. It was anticipated that making salient to respondents that their interactional Other (the community) lacked a consensual position about the conservation of the vulture would lead to more ambivalence than making salient that a consensual position existed. Results supported this idea, showing that meta-representations about how views are distributed in a community can indeed intervene in self-reflexivity. This brings forward the social dimension of ambivalence (a process most often studied as intra-personal), demonstrating how important Others in the proximal context are for decision-taking (Castro, 2012; Echelroth *et al.*, 2011) and indeed offering an empirical illustration of how we think with others – i.e., of one of the processes that make thinking “*necessarily social*” (Moscovici & Markova, 2000, p.249).

There are some limitations to these studies that must be acknowledged. Although the analyses overall returned good levels of explained variation, the sample is small, and some of the measures were either based on one item (the two measures of ambivalence) or on two items (*e.g.*, actions of the Project). These issues resulted from options meant to keep the survey short, yet they make the results less reliable and future studies with stronger measures are needed to confirm the patterns here identified. In addition, future

studies may consider using different measures for ambivalence and valence of attitudes, instead of one single measure (Study 1). They ought to clarify also the role of meta-representations of how the community acts, as our findings are inconclusive in this regard. However, even if they need to be taken only as indicative, our findings support, from an applied perspective, the relevance of exploring the positions of local communities for biodiversity conservation at different levels, as the overall pattern of results suggests that laws can encourage local biodiversity choices, independent of informal norms, through their contribution to the formation of the personal norm and willingness to act.

From a theoretical perspective, in turn, the findings evidence how important it is to consider more than one level of representational processes when we wish to understand the relation between individuals and institutional/policy proposals. They show how, in order to grasp how meaning-making and decision-taking are guided by normative principles that keep us attentive to the Other, it is indispensable to jointly take into account the interactional Other of our close-by communities, as well as the institutional Other of our nations (Mouro & Castro, 2012; Staerklé *et al.*, 2011). We watch others and are “*watched*” by others – as one of our interviewees put it – and it is important to keep in mind that these Others are both co-residents in the community and the nation’s institutions. Consequently, moments of change in a community's understanding of the normative aspects involved in the co-elaboration of representations implies taking into account the interactional and the institutional levels. In addition to this, these findings suggest, also in line with SRT, that meta-representations about the consensus an emerging representation obtains should be more thoroughly investigated. These meta-representations seem to be capable of attenuating or intensifying ambivalence, and

therefore have consequences for delaying or accelerating the adoption of new actions, and the pace of social change.

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