Local identity as an amplifier:

Procedural Justice, Local Identity and Attitudes towards New Dam Projects

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Abstract

Local environmental changes are complex processes that are not always easily accepted by the communities. Research has shown that perceived procedural justice is a key variable in understanding these debates. From a perspective based on Social Identity Theory, we hypothesize in this paper that this effect will be particularly stronger for those that have a high degree of place identity, at least in the early stages of such projects. Results based on two large-scale studies conducted on sites where two dams were projected to be built support our hypotheses (Studies 1, N = 248 and Study 2, N = 385), and show that these results stand, even after controlling for demographic factors, perceived trust and expected outcomes of the project for the region. These results are discussed based on the implications they have for project communication and management in early stages of project implementation.

Keywords: procedural justice, local identity, attitudes, dams

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1. Introduction

The idea that individuals' judgments and behaviours are shaped by their conceptions about what is fair has been widely explored within justice literature (Tyler, Boeckmann, Smith, & Hou, 1997; Tyler & Smith, 1997). Traditionally, these studies have shown the important role that the perception of distributive justice (Adams, 1965; Walster, Walster & Bernscheid, 1978) plays in these processes. This approach is particularly interested in the way people decide if their outcomes in a given situation are fair or not fair (Kramer, 2013; Tyler & Smith, 1997). However, more recently, some authors argue that there are other aspects in justice judgments that may play a more fundamental part than the distribution of costs and benefits (e.g. Tyler, 2000; Van den Bos & Lind, 2002). When evaluating the fairness of a given situation, people frequently focus on the way in which decisions are made, i.e., on the fairness of the procedures, which in justice literature has been labelled as procedural justice (e.g. Lind & Tyler, 1988; Thibaut & Walker, 1975). According to Tyler (2000), judgments on the fairness of procedures are mainly influenced by the existence of "opportunities for participation, the neutrality of the forum, the trustworthiness of the authorities, and the degree to which people receive treatment with dignity and respect" (pp. 121).

Evidence suggests that, in some situations, perceived fairness in the procedures used to arrive at a decision is a more significant determinant of people's reactions than the perception of expected outcomes (e.g. Leventhal, 1980; Tyler et al., 1997). Also, studies where people were asked to talk about personal experiences of injustice report that they primarily refer to whether they were treated with respect or dignity

during the negotiation process (Messick, Bloom, Boldizar, & Samuelson, 1985; Mikula, Petri, & Tanzer, 1990). In the environmental context, procedural justice seems to be an important determinant of the acceptance of new projects. For instance, in a recent study about the choice of location for a nuclear waste facility, Krutli et al. (2012) emphasized the need to take issues related with procedural fairness into further consideration. In the same manner, Gross (2007) and Lima (2006) showed that procedural justice plays a fundamental role in the prediction of attitudes towards new projects (wind farms and solid waste facilities). Some evidence suggests that procedural justice would be particularly important in the early stages of a project, when there is relatively little information available about the specificities of the project at hand. For instance, the fairness heuristic theory proposed by Lind and colleagues (e.g. Lind, 2001; Van den Bos & Lind, 2002) assumes that fairness judgments should be based on relevant available information at a given moment. In contexts where specific information about the real consequences of a project is unavailable, individuals' perceptions about new project will probably be based on heuristic substitutes, such as the perception about the way the decision-making process regarding the project has been conducted (i.e., perceived procedural justice).

Since the initial studies in this domain (e.g. Leventhal, 1980; Tyler et al., 1997), literature on the effects of procedural justice on the outcomes of decision-making processes has flourished, and several authors have tried to further explore possible factors which influence these processes. Some theories suggest that this is not a straightforward effect, but that it is instead influenced by important moderators of the decision-making process itself, such as the sensitive nature of the issue at hand (Skitka, 2002; Skitka, Bauman & Mullen, 2008) and the characteristics of the individuals and groups involved (Earle & Siegrist, 2008).

The present paper goes in the same direction, and tests this issue in the context of a community's position regarding the implementation of two new dams in their locality. In an innovative way, we are especially interested in understanding the moderator role that local identity may play in this process.

1.1. Moderators of the effects of procedural justice on attitudes: Local identity as an amplifier

Recent studies have sought to explore the role of significant moderators of the effects of perceived procedural justice on attitudes. For instance, although still in an early phase of development, the work of Earle and Siegrist (2008) has shown that trust may be an important factor to consider in these processes. In this study, the authors showed that the perceptions of procedural justice are greater especially when individuals trust the people involved in the process.

However, two theoretical alternatives have been especially influent in this domain: these are the perspectives of the value protection model of justice reasoning (VPM) or the "integrated theory of moral convictions (ITMC) (Skitka, 2002; Skitka, Bauman & Mullen, 2008), and the social identity theories of justice (e.g. Lind & Tyler, 1988; Tyler & Lind, 1992).

On the one hand, the VPM/ITMC suggests that moral mandates (e.g. outcome preference held with strong moral conviction) are one of the most relevant moderators of the effect of procedural justice on attitudes. Typically, these moral mandates are described as "subjective beliefs that something is fundamentally right or wrong. They comprise concerns about human welfare, justice, and rights" (Bauman & Skitka, 2009, p. 41). The fundamental claim, according to this perspective, is that whenever people perceive outcomes to be important to their moral beliefs they base their judgments on the level of consistency between the actual outcomes and their moral

preferences, and tend to ignore the role of procedural information. These predictions have been tested in the context of strong moral issues, such as abortion (Bauman & Skitka, 2009) or homosexual discrimination (Skitka, 2002). However, despite the existing evidence, some authors argue that these theories still warrant further testing, because it is not often possible to find the actual significant interaction between judgments of procedural fairness and moral mandates, and on some occasions it is even possible to find the opposite pattern of responses (Besley, 2012). More recently, Besley (2012) tested this theory in the context of a nuclear energy decision-making process and found that, contrary to VPM/ITMC predictions, the more anger a person said he or she would feel if a decision were to counteract the initial point of view, the more perceived procedural fairness mattered. According to the author, these results could be explained in this context because, as anger mounts, so too would the expectations for voice and action regarding the issue. Thus, it might be that environmental decision-making processes have specific characteristics that produce a different pattern of responses than what would be expected according to the proposals of VPM/ITMC theories alone.

In this regard, we argue that one other perspective that may provide an alternative input on this issue, with a particular emphasis in the environmental domain, is the social identity theory of justice (e.g. Lind & Tyler, 1988; Tyler & Lind, 1992), and in particular local identity approaches (e.g. Bonaiuto et al, 1996; Lima & Marques, 2005). The basic tenet of the social identity theory of justice is that the perceptions of procedural fairness are fundamentally important because they validate social standing. In fact, at least in some occasions, people are more interested in having their social standing validated by fair treatment than they are in the actual outcomes those procedures yield (e.g. Lind & Tyler, 1988; Tyler & Lind, 1992). Some evidence

suggests that this prediction seems to be particularly relevant in the context of environmental decision-making processes.

Clayton and Opotow (2003) call our attention to the fact that, in environmental conflicts, it is not only the "what" (outcomes) or the "how" (procedures) that are at stake, but also the "who": inclusion and identity processes are fundamental to understanding these conflicts. More recently, and in a similar way, Parris and colleagues (Parris, Hegtvedt, Watson & Johnson, 2013) also showed that the perceived legitimization of actions by the group influences the perception of justice, when related with environmental concerns.

Following up on this line of studies, in this paper, we are especially interested in understanding the role that a specific facet of individuals' social identity — local identity — may play in the effects that perceived procedural justice could have in the attitudes that regard high-impact environmental projects in the context of local communities. In accordance with previous studies in the environmental domain (Besley, 2012), we expected that procedural judgment would be fundamentally more important for those who had a strong connection with their place of residence, and for whom the consequences of the project are seen in a more relevant way. As far as we know, this is the first study that has ever tested this relationship in the environmental domain.

Since the late seventies, several concepts have been proposed to study connection to place: e.g. place identity (e.g. Lalli, 1992; Proshansky, 1978), place attachment (Altman & Low, 1992; Fried, 2000), sense of community (McMillan & Chavis, 1986), sense of place (Jorgensen & Stedman, 2001), and rootedness (Tuan, 1980). Despite its different origins and the corresponding differences in theoretical focus (e.g. human geography, social psychology, environmental psychology), these terms

are frequently used interchangeably, which requires some caution when studying this topic. In this paper, and following the perspective of social identity theory (SIT) (Tajfel, 1978; Tajfel, 1981; Tajfel & Turner, 1986), we define local identity as a form of social identity. In general, social identity can be defined as "those aspects of an individual's self-image that derive from the social categories to which he perceives himself as belonging" (Tajfel & Turner, 1986, p. 16). When considering local identity, we are contemplating the contribution of the specific role that a given physical place has for people's self-image. Hence, we refer to the concept of local identity as the conscience of belonging to a defined group based on place of residence, and the emotional and evaluative significance resulting from that membership (Lima, 1997).

The moderator role of group identification has been extensively demonstrated within environmental psychology research (Bonaiuto, Bonnes, Ceccarelli, & Martorella, 2008; Lima, 1997; Lima & Marques, 2005), and, in a broader way, within social psychology (e.g. Marques et al., 2014; O'Brien & Hummert, 2006;). Generally speaking, these studies explore the way high- and low-identifiers react when faced with a threat to their identity. In a very general way, we can say that, when faced with threats to their identity, high-identifiers tend to stick with the group and defend group norms, whereas low-identifiers tend to leave the group more easily, as well as being less willing to fight for a group that does not contribute to their positive social identity. An example of the empirical support for this idea can be found in studies by Terry and Hogg (1996) about individuals' intentions to behave in accordance with their group norms. These authors showed that perceived group norms predicted behavioural intentions only for high-identifiers, whereas for low-identifiers they did not (see also Jetten, Spears, & Manstead, 1997). In a similar way, Spears, Doosje and

Ellemers (1997) also showed an effect of degree of group identification on self-stereotyping. In this case, however, the effect was moderated by the level of identity threat, in such a way that, when faced with threats to the value of social identity, high-identifiers self-stereotyped more than low-identified participants. On the contrary, when the value of social identity was not threatened, there were no significant differences in the degree of self-stereotyping from either high- or low-identified participants.

This pattern of responses of low- and high-identifiers also seems to apply when thinking about local identity. In one study, Bonaiuto et al. (1996) explored the relevance of local and national identity processes, as well as other traditional predictors of environmental evaluation (e.g. socio-demographic variables, environmental concern), on the perception of local and national beach pollution. As predicted by SIT, results showed that residents with higher levels of local or national identity perceived lower levels of pollution in local or national beaches. Similarly, in a study about identity contents and its relationship with individuals' degree of local identification, Duarte and Lima (2005) also demonstrated that residents with higher levels of local identity perceived higher levels of environmental quality in their neighbourhoods, maximizing their positive characteristics and minimizing negative ones. Results from both studies suggest that individuals were using social creativity strategies to cope with potential threats to a positive social identity (Tajfel & Turner, 1986).

Evidence within justice literature shows that people who share a similar group membership are sensitive to the same justice norms, and, more importantly, to the violation of those norms (Tyler & Smith, 1997). For instance, participants in one collective action, the 1980 St Paul's riot in Bristol, England, who were highly

identified with the community, identified police raids on the local community as a violation of the community's rights, while nonparticipants, who did not identify with the community, did not (Reicher, 1984). Clayton and Opotow (2003) state that this connection between justice issues and group identity is particularly relevant in environmental debates.

Based on these evidences, we argue in favour of the moderator role played by local identity, in the way procedural justice affects attitudes towards new projects. More specifically, we argue that local identity will amplify the relationship between procedural justice and attitudes towards new projects — we expect that the effect of procedural justice on attitudes will be stronger for high- rather than for low-identified individuals. The rationale behind this idea is that high-identifiers would be especially concerned with the consequences of a new project for their community. In the sense that they are especially willing to defend the group and its norms (Jetten et al., 1997; Terry and Hogg, 1996), they would be especially concerned about new projects that might bring potential changes to their communities (and the contrary may also hold in the sense that they will perceive in a more positive way projects that are perceived to be beneficial to the community). Moreover, in a similar way, they will be particularly sensitive to the way the decision-making process is conducted.

2. Studies

In this article, we are interested in exploring the role that procedural justice and local identity play as predictors of attitudes towards new projects. Following up on studies that focused on the role of local identity (e.g. Bonaiuto et al., 1996; Reicher, 1984), we expect to find a significant interaction between perceived procedural justice and local identity, in the sense that the effect of procedural justice on attitudes will be particularly stronger for individuals highly identified with their place of residence

(H1). We expect this interaction to remain significant, even after controlling for important factors that influence attitudes towards new projects, such as trust (Earle & Siegrist, 2008) and the actual perceived outcomes associated with the project (Lima, 2006; Tyler, 2000).

Interestingly, this hypothesis was tested in the context of two projects with different levels of opposition against the construction of a dam. As we shall see in more detail below, this is particularly interesting because it gives us the opportunity to test whether the expected moderator role of local identity holds, even when different levels of anger or moral interests are at stake (Besley, 2012). In both cases, the studies were conducted in the early, pre-construction phases of the projects, when not much information was available. These are the typical conditions where judgments of procedural fairness are expected to have a more significant role (e.g. Leventhal, 1980; Tyler et al., 1997). As far as we know, this issue has not been studied specifically in this context of dams. However, given their similarities with other high impact projects, we may expect a similar pattern of community's reactions to the project.

The studies included in this article are part of two larger field survey studies, which aimed to explore local attitudes and expectations towards two new hydroelectric dams to be built in Portugal, namely the Alvito and Fridão hydroelectric dams. These dams are part of a national plan for the production of renewable energies, in which the construction of 10 new dams suited for hydroelectric production is contemplated. Dams are one of the main sources of renewable energy production, but their benefits are often clearer at a national level, rather than at a local/regional level (e.g. local employment, road connections). On the other hand, this type of construction also has a clear negative impact on nature (ecosystems, biodiversity, pollution), as well as on the built and social landscape of places (Devine-Wright,

2009), at a local/regional level. For these reasons, decisions to build these infrastructures may often be associated with the rise of different local movements and protest actions, although, as we shall see, this may depend on the specific context that is being analysed. Both studies were designed to collect extensive information about the local views on these projects, and are based on an inclusive strategy of participatory decision-making (Lima, Moreira, & Marques, 2012). The results of these psychosocial studies were included in the respective environmental impact assessment reports.

The two studies were based on structured interviews, and followed a very similar (content-adapted) protocol. Moreover, in order to minimize the weaknesses of correlational studies, some precautions were taken: a) the sample of participants was representative of the residents living close to the project implementation area, b) the variables were assessed through valid measures, and c) the interviewers were trained to exhibit a controlled and consistent behaviour.

2.1. Study 1: Alvito project

The Alvito dam project is located in the central region of Portugal (i.e., Castelo Branco, Vila Velha de Rodao), approximately 111 miles from Lisbon. The wall of the damn is about 2 miles from Foz do Cobrão and the water mirror is expected to expand for 18 miles. It is mostly a rural area, inhabited by older and economical disadvantage individuals or by seasonal residents.

In the case of the Alvito hydroelectric dam, the decision to build the dam in the region was not met with great opposition by local communities, since few residential areas would be affected, and those that would were in need of economic development and better infrastructures. Nevertheless, some opposition movements were also organized, but these were mainly led by a group of organized environmental

NGOs. Initial interviews carried out with relevant stakeholders (n = 36) revealed a general positive attitude regarding the dam (85.2% of the stakeholders were very positive towards the construction of the dam). They also referred a higher number of advantages than disadvantages for the region. The main advantages that were identified were of a socioeconomic and environmental nature. These were linked mainly with the increase in water and energy supply that represents an important benefit for local development.

2.1.1. Method

Participants. The initial sample was composed of 400 individuals randomly selected from amongst the residents directly affected by the future artificial lake or by its high-tension power lines (i.e., Castelo Branco, Vila Velha de Ródão, and Nisa). In the selection of the sample, we considered individuals older than 18 years old. In the survey, we presented an initial question, to ascertain whether individuals had heard of the dam project. Only these individuals could comply with the attitude-evaluating parameters contained in the questions regarding the building of the dam. Hence, in the present study, we only considered these individuals (representing 62% of the initial sample). In this study, 248 participants (46.4% women) were interviewed. In this sample, the age of the participants ranged from 18 to 93, with a mean of 65.09 (SD = 15.62). 75.8% percent of the respondents had less than 4 years of education, 13.3% had 9 years, 6.5% had 12 years, and 4% had more than 15 years of education. 71% were married or had a partner, and only 29% were single, divorced, or widowers. The average length of residence among the respondents was 44.3 years (SD = 26.5), and 69.5% were property owners in the region. The sample considered in the present study was composed of significantly more men, χ^2 (1) = 25.88, $p < .001$, had a higher percentage of married people, χ^2 (4) = 15.78, $p = .003$, a higher level of education, t

(397) = - 2.49, p =.013, and a higher percentage of property owners, χ^2 (1) = 8.45, p = .004, than the sample of individuals that stated they had never heard about the dam. However, we believe that these specific demographic characteristics of the sample do not pose any problem for the test of our theoretical predictions. Either way, in order to avoid any sampling issues, all these demographic factors were controlled for in the regression analyses.

Measures.

Attitudes towards the construction of the dam. Following Lima (2006), attitudes towards the construction of the Alvito dam were measured using a scale composed of 3 items (i.e. "I think that the Alvito damn should be built"; "We need to build the Alvito damn", "I think that building the Alvito damn is a good thing"). All the items were answered on 5-point scales (e.g. 1 = totally disagree, 5 = totally agree). Factorial analyses revealed a unifactorial measure explaining 86% of the variance. Inter-item correlation ranged from 0.75-0.84. An indicator of attitudes was computed averaging the items (higher values on this indicator stand for more positive attitudes). This scale revealed good psychometric qualities (Cronbach alpha = 0.92) (Field, 2009).

Local identity. The strength of local identity was assessed through a set of four statements about the relationship between the respondents and their place of residence. This measure was based on the dimensions of social identity (Tajfel & Turner, 1986), and adapted by Bonaiuto et al., (1996), and Lima and Marques (2005) to the context of local identity. They assess place self-categorization ("I feel I belong to this [place]") and emotional bonding ("I am proud to live in [place]"). The items were answered on a 5-point scale (1 = totally disagree, 5 = totally agree). Factorial analyses revealed a unifactorial measure explaining 54.07% of the variance. Inter-item correlation ranged from 0.28-0.66. An indicator of local identity was computed

averaging the items (higher values standing for stronger local identity). This scale also revealed adequate internal consistency (Cronbach alpha = 0.70) (Field, 2009).

Perceived procedural justice. Procedural justice was operationalized with two statements about the decisional process used by Lima (2006) and based on Tyler (1988), reflecting the idea that the decision process was fair and inclusive (e.g. "The decision process has been fair"; "People have plenty of opportunities to participate in the decision process"). The two items were answered on a 5-point scale (1 = totally disagree, 5 = totally agree). Factorial analyses revealed a unifactorial measure explaining 82.54% of the variance. Inter-item correlation was 0.26. An indicator of procedural justice was computed averaging the items (higher values corresponding to perceived fairness in the decision process). This scale also revealed good psychometric qualities (Cronbach alpha: 0.78).

Perceived trust. Perceived trust regarding the proponent of the dam was operationalized with three items based on Lima and Castro (2005) and Lima (2006) (e.g. "I trust the electricity company that is building the dam"; "I trust the technicians who did the impact studies for the dam"). The three items were answered on a 5-point scale (1 = totally disagree, 5 = totally agree). Factorial analyses revealed a unifactorial measure explaining 82.76% of the variance. Inter-item correlation ranged from 0.70-0.76. An indicator of perceived trust was computed averaging the items (higher values corresponding to higher levels of perceived trust). This scale also revealed good psychometric qualities (Cronbach alpha: 0.90).

Expected outcomes of the project for the region. This scale was based on the initial results of the qualitative interviews conducted with the key stakeholders identified in the process. Five main outcomes were identified as important expectations regarding the implementation of the project in the region (i.e., electric

supply, the roads, employment, local development, and local tourism). Based on the proposal by Eiser, van der Pligt and Spears (1988), the items were answered on a 5-point scale (1 = this aspect of region will get much worst, 5 = this aspect of the region will get much better). Factorial analyses revealed a unifactorial measure explaining 47.46% of the variance. Inter-item correlation ranged from 0.30-0.47. An indicator of expected outcomes of the project for the region was computed averaging the items (higher values standing for more positive expectations). This scale also revealed adequate internal consistency (Cronbach alpha = 0.71) (Field, 2009).

Characterization of the participants. Participants were also asked to answer a set of questions, which aimed to define their socio-demographic attributes: sex, age, education, marital status, length of residence in that area, and whether they owned property in the region.

2.2.2. Procedure.

Interviews were conducted face to face by trained interviewers. They took place at the respondents' houses, and took approximately 30 minutes. This technique of data collection was used because it maximizes the response rate on controversial issues, and allows people with low levels of education to answer the questionnaire. The sample stratification was based on two criteria: the municipalities that constitute the target population (i.e., the municipalities affected by the project) and population density (i.e., number of houses in the municipality higher than 10). In each location, the houses to sample were randomly chosen, and in each house the interviewee was also randomly chosen — the last adult to have his or her birthday, provided that he or she consented to be part of the study. First contact was always done in the presence of the interviewee, but, in some cases, some telephone calls were needed to ensure the interviews.

The interviewers received specific training regarding the procedures for the interviews, and the structure of the interview protocol. In order to perform a quality control of the interviews by a member of the team, an ID code number was given to each of the participants, and the name, address, and phone number of the interviewee were collected. A random sample of 36% of the interviews was inspected, by phone, by specialized technicians. Only one interview was not validated, and is not a part of this study.

2.1.3. Results

The descriptive analysis (Table 1) revealed that the attitude of the residents towards the construction of the Alvito dam is favourable and quite homogeneous (M = 4.09, SD =.70*), t (227)* = 23.56, p <.001. Additionally, this sample also shows a strong sense of local identity (M = 4.33, SD = .59), t *(245)* = 35.29, p <.001, a high trust level in the process (M =3.49, SD=0.68), t *(213)* = 10.50, p <.001, and favourable expected outcomes of local development (M = 3.80, SD =0.44), t *(240)* = 28.45, p <.001. Finally, participants revealed a medium level of procedural justice (M = 3.03, SD = .87), t *(145)* = .52, p = .60 (all values are compared to the medium level of the scale).

To test the hypothesized interaction effects between procedural justice and local identity, a four-stage hierarchical multiple regression was conducted with the attitude towards the Alvito dam as the dependent variable (Table 2). The demographic variables were entered at Step 1, perceived trust and expectations regarding the project were entered at Step 2, procedural justice and local identity were entered at Step 3, and finally the interaction between procedural justice and local identity was entered at Step 4. Following the procedure proposed by Baron and Kenny (1984),

both procedural justice and local identity were centred at their means. These centred variables were then multiplied to create the interaction variable.

Our goal was to test whether our hypothesized interaction would add a significant effect, even after controlling for the effects of other confounding variables often associated with attitudes towards new projects in existing literature, namely demographic variables and expected outcomes (Lima, 2006) and perceived trust (Earle & Siegrist, 2008).

The hierarchical multiple regression revealed that, at Step 1, demographic factors explained 16% of the variation in the attitude towards the dam. Including trust and the expected outcomes of the project for the region in Step 2 accounted for an additional 16% of the variance in attitude, and this change in R^2 was significant, F (2, 119) = 14.22, $p < .001$. Adding procedural justice and local identity to the regression model explained an additional 5% of the variation in attitude, and this change in R^2 was significant, F (2, 117) = 4.09, $p = .019$. Finally, adding the hypothesized interaction between procedural justice and local identity explained an additional 2% of the variance, and this change in R^2 was also significant, F (1,116) = 3.93, $p = .050$. When all the variables were included in the model, only the being property owners criterion remained significant in the group of demographic factors, $B = .29$, $SE = .11$, $t = 2.62$, $p = .010$. Perceived trust, $B = .20$, $SE = .08$, $t = 2.44$, $p = .016$, expected outcomes, $B = .34$, $SE = .12$, $t = 2.84$, $p = .005$, and local identity, $B = .22$, $SE = .09$, $t = 2.56$, $p = .012$, also remained significant. Finally, more important for our purposes, the interaction between perceived procedural justice and local identity was also significant, $B = .16$, $SE = .08$, $t = 1.97$, $p = .050$. Together, all the variables explained 39% of the variance in the attitude towards the Alvito dam.

In order to explain the interaction between perceived procedural justice and local identity, we did a simple slope analysis using the PROCESS procedure proposed by Hayes (2013). We plotted the attitude towards the dam when procedural justice was low and high at also low and high levels of local identity. In both cases, low and high levels were calculated at 1 *SD* below or above the mean (Figure 1).

Results revealed that, as expected, when local identity was higher, perceived procedural justice was related with more positive attitudes towards the dam, $B = .17$, $SE = .07$, $t = 2.33$, $p = .021$. There were no significant effects of procedural justice on attitudes, when local identity was low, $B = -.03$, $SE = .08$, $t = -.40$, $p = .69$.

2.1.4. Discussion

H1 was supported by the data, thus revealing a significant interaction effect between perceived procedural justice and local identity on the attitude towards the dam. As expected, higher perceived procedural justice positively affected the attitude towards the dam, but only for those individuals who also showed a high level of local identity. Significantly, these effects hold, even after controlling for demographic factors, trust, and expected outcomes of the project.

It is important to note that, besides the expected interaction, we also found a positive main effect of local identity on the attitude toward the dam. Although this was not hypothesized we believe that it might be explained by the favourable opinion held by local communities towards the dam. The basic idea would be that those with higher levels of local identification do care more about the issue. Since they see it as a positive project to the region, it is possible that those who have a high identification would also have a more positive attitude towards the damn in general.

However, despite these interesting results, this pattern requires further testing. First of all, this was a case where there was not much opposition from the

communities against the construction of the dam. Hence, it may not be the proper case to test whether the effect of procedural justice holds, even if anger against the project still occurs, as it is usually the case, when strong moral mandates are involved (Besley, 2012; Skitka, 2002; Skitka, 2008). Furthermore, some of the measures that were used had some limitations (e.g. reduced number of items). Study 2 allowed a further test of our hypotheses, while controlling for these factors.

2.2. Study 2: Fridão project

The Fridão dam is located in the North of Portugal, 24 miles away from Oporto. The water mirror is about 27 miles and covers 5 municiplatities being one of the most developed Amarante. The main wall is right in Fridão and its about 4 miles from Amarante. The impacted area is heteregenous in socio-economic terms with very poor rural regions and with wealthy business cases (e.g., winery and tourism).

In the case of the Fridão hydroelectric dam, there was an overall more negative reaction against the construction of the dam than in the Alvito case. Protests were mainly led by local communities that opposed the construction of the dam due to its consequences for local economic activities (e.g. tourism and submersion of agricultural land) and the natural environment (e.g. water pollution and landscape change, affecting activities like canoeing). The initial interviews with relevant stakeholders in the region (n = 82) revealed a mixed attitude towards the project: positive (41.5%), negative (31.7%), and neutral (22%). The main negative impacts referred were related with the loss of land and the consequences for local activities (e.g., tourism, water use). The positive impacts were related with the improvement in local development and energy supply available. Nevertheless, although some positive aspects were identified, the attitude towards the damn is less positive than in the Alvito case, with much more anger and hostility towards the dam from at least some

groups of local citizens. Hence, we believe that this case study presents a favourable context to test whether the interaction between procedural justice and local identity still holds, even in a situation where there appears to be more negativity regarding the construction of the dam.

2.2.1. Method

Participants. The initial sample was composed of 520 individuals randomly selected from amongst the residents in five municipalities directly affected by the future artificial lake (i.e., Cabeceiras de Basto, Ribeira de Pena, Celorico de Basto, Mondim de Basto, and Amarante). Similarly to the Alvito study, in the selection of the sample, we considered individuals older than 18 years old. Once again, only the individuals that said they knew the project were considered in the present study (representing 74% of the initial sample). The sample was then composed of 385 individuals (60.3% female). The age of the participants ranged from 18 to 91, with a mean of 54.6 (SD = 16.71). More than fifty percent of the respondents (64.3%) had less than or equal to 4 years of education, 19.5% had at least 9 years of education, 8.6% at least 12 years of education, and only 7.6% had more than 15 years of education. 72.4% were married or had a partner, and only 27.6% were single, divorced, or widowers. The average length of residence of the respondents was 31.89 years (SD = 21.16), and 38% were property owners in the region. The sample considered in the present study was composed of significantly more men, χ^2 (1) = 13.45, $p < .001$, had a higher percentage of younger people, t (517) = 2.60, $p = .010$, a higher level of education, t (517) = - 4.63, $p < .001$, a lower duration of residence in the region, t (517) = 2.35, $p = .019$, and a higher percentage of property owners, χ^2 (1) = 23.71, $p < .001$, than the sample of individuals that stated they had never heard

about the dam. As in Study 1, all these demographic factors were controlled for in the regression analyses.

Measures.

Attitudes towards the construction of the dam. We used the same measure as in Study 1, while adding two extra items to tap into a more emotional component of the attitude towards the dam (i.e., "I am very favourable towards the building of the Fridão dam", "I am pleased that the Fridão dam is being built"). Factorial analyses revealed a unifactorial measure explaining 86.75% of the variance. Inter-item correlation ranged from 0.67-0.96. This scale revealed good psychometric qualities (Cronbach alpha: 0.96) (Field, 2009).

Local identity. We used the same measure as in Study 1. Factorial analyses revealed a unifactorial measure explaining 64.98% of the variance. Inter-item correlation ranged from 0.41-0.73. This scale also revealed good psychometric qualities (Cronbach alpha: 0.82) (Field, 2009).

Perceived procedural justice. The same measure as in Study 1 was used, while adding two extra reversed items ("People who decide do not care about the opinion of the communities", "The truth is that everything has already been decided without asking the communities"). Factorial analyses revealed a unifactorial measure explaining 52.69% of the variance. Inter-item correlation ranged from 0.21-0.57. This scale also revealed adequate psychometric qualities (Cronbach alpha: 0.70) (Field, 2009).

Perceived trust. We used the same measure as in Study 1. Factorial analyses revealed a unifactorial measure explaining 88.84% of the variance. Inter-item correlation ranged from 0.77-0.94. This scale also revealed good psychometric qualities (Cronbach alpha: 0.94) (Field, 2009).

Expected outcomes of the project for the region. We used the same measure as in Study 1, but added one item that appeared in a more systematic way in the initial qualitative study (i.e., the impacts on local commerce)**.** Factorial analyses revealed a unifactorial measure explaining 71.73% of the variance. Inter-item correlation ranged from 0.38-0.86. This scale also revealed good internal consistency (Cronbach alpha = 0.92) (Field, 2009).

Characterization of the participants. Participants were also asked to answer a set of questions, which aimed to define their socio-demographic attributes: sex, age, education, marital status, length of residence in that area, and whether they owned property in the region.

2.2.2. Procedure.

Study 2 followed exactly the same procedure of data collection as Study 1. In this case, a random sample of 17% of the interviews was inspected, by phone, by specialized technicians. All of the interviews were validated.

2.2.3. Results

Descriptive analysis (Table 3) revealed that, on average, participants had a negative attitude towards the dam (M = 2.60), $t\ (365)$ = - 6.39, p <.001, but this position was not at all consensual within that sample, as the high standard deviation value shows (SD=1.21). On the contrary, local identity was consistently high (M = 4.60, SD =. 69), $t\ (383)$ = 45.73, p <.001, showing a strong sense of local connection. The levels of procedural justice were low (M = 2.38, SD = 0.93), $t\ (320)$ = - 11.92, p <.001, as were those of perceived trust (M = 2.88, SD = 1.04), $t\ (313)$ = - 1.99, p = .049. There was nevertheless a favourable level of expectations regarding the dam for local development (M = 3.41; SD = 0.74), $t\ (366)$ = 10.73, p <.001 (all values are compared to the medium level of the scale)

To analyse the moderator role of local identity on the relationship between perceived justice and attitude towards the construction of the Fridão dam, we followed the same procedure as in Study 1 (Table 4).

The hierarchical multiple regression revealed that, at Step 1, the demographic factors explained 16% of the variation in the attitude towards the dam. Including trust and the expected outcomes of the project for the region in Step 2 accounted for an additional 40% of the variance in attitude, and this change in R^2 was significant, F (2, 237) = 109.34, $p < .001$. Adding procedural justice and local identity to the regression model explained an additional 0.7% of the variation in attitude, and this change in R^2 was not significant, F (2, 235) = 1.93, $p = .14$. Finally, adding the hypothesized interaction between procedural justice and local identity explained an additional 1% of the variance, and this change in R^2 was also significant, F (1, 234) = 5.70, $p = .018$. When all the variables were included in the model, gender, $B = .21$, $SE = .11$, $t = 2.02$, $p = .044$, and time of residence in the region, $B = .01$, $SE = .00$, $t = 2.09$, $p = .038$, remained significant in the group of demographic factors. Perceived trust, $B = .16$, $SE = .05$, $t = 3.05$, $p = .003$, and expected outcomes, $B = .94$, $SE = .08$, $t = 12.61$, $p < .001$, also remained significant. Finally, more important for our purposes, the interaction between perceived procedural justice and local identity was also significant, $B = .19$, $SE = .08$, $t = 2.39$, $p = .018$. Together, all the variables explained 58% of the variance in the attitude towards the Fridão dam.

Simple slope analyses revealed that, as expected, and similarly to Study 1, when local identity was high, perceived procedural justice was related with more positive attitudes towards the dam, $B = .37$, $SE = .08$, $t = 4.65$, $p < .001$. There were no significant effects of procedural justice on attitudes when local identity was low, $B = -.19$, $SE = .10$, $t = 1.85$, $p = .06$ (Figure 2).

2.2.4. Discussion

The results of this study replicated the pattern found in Study 1, confirming our initial hypotheses. We show that, even in contexts where there is a more negative reaction to the project, procedural justice still has a role to play, and that it is especially important to those who value the region. We believe that our results go in the same direction as the pattern found by Besley regarding nuclear energy (2012). Once more, these results still hold, even after controlling for several other variables associated with the attitudes regarding new projects (Earle & Siegrist, 2008; Lima, 2006). Interestingly, in this case we did not find a significant main effect of local identity on the attitude towards the dam.

3. General Discussion

In this paper, for the first time, we tested the interactive effect of procedural justice and local identity as important determinants of the attitude towards new projects. Following existing literature in justice perception (Tyler & Smith, 1997) and environmental psychology (Bonaiuto et al., 2008; Lima, 1997; Lima & Marques, 2005), we expected the effects of procedural justice on attitudes to be moderated by the level of local identity, with high-identified individuals showing stronger effects of procedural justice on attitudes than low-identified individuals.

Based on two large-scale field studies, our results seem to support our hypotheses. Moreover, this effect occurs regardless of the level of resistance or acceptability of the project. In line with previous studies in the environmental domain (e.g. a community's reactions to a nuclear energy project, Besley (2012)), we showed that the perceptions of procedural justice are still important, and that they even seem to matter more for those who have a stronger emotional involvement with the issue. According to Besley (2012), it is possible that these results are explained by the fact

that we expect more voice and action from those who attribute a higher importance to a situation. In fact, this is also the expected pattern from social and local identity studies, which show that high-identifiers are the ones who tend to stick with the group and defend it, especially when threatening situations occur (e.g. Boniauto et al., 1996; Lima & Marques, 2005; Reicher, 1984). Feeling part of the group makes individuals become more sensitive to the same justice norms, and especially to the violation of those norms (Tyler & Smith, 1997). We believe that these results are interesting and suggest that, in a real life situation, where people are faced with the prospect of a major environmental change to their surroundings, being involved and knowledgeable about the characteristics of the project early on may be an important step for this project to be well accepted within the communities, particularly by those who value them. In fact, strong place identity motives may turn out to have a significant power: they may amplify perceptions about the project and influence attitudes in a meaningful way.

Our results can also be analyzed from the categorization approach to justice proposed by Wenzel (2004, for a review). This model, conceived for distributive justice, proposes that justice (beyond justifying self-interest) is dependent on identification with the group, and some implications were derived to procedural justice. As Wenzel puts it "legitimacy and impartiality are claimed by generalizing distinctive groups to an inclusive category, for them to become valid values to all involved" (Wenzel, 2004, p. 244). For this reason, procedural justice that stresses the entitlement to equal treatment is a common value defining the category, and should be highlighted when each group identity is salient, as it happened in our studies.

However, although novel and interesting, these results still pose some important challenges. First of all, although the pattern of results seems to support our

predictions, it is important to acknowledge that this type of influence seems to be somehow bounded by the realities and specificities of the project at hand. Both these projects are related with the construction of dams. Although it does not seem probable, given that our results follow the predictions and evidences in existing literature in other fields (Reicher, 1984; Tyler & Smith, 1997), it may be possible that these results are specific to the *type* of project at hand. In this case, we think that it would be important to replicate these findings in the early phases of different types of projects. Also, although we considered two different projects, with different degrees of community acceptability, we did not actually measure the level of anger (Besley, 2012) or moral mandate (Skitka, 2002) imposed by the situation. In order to properly address these theoretical issues, it would be important to include these types of measures in future studies.

On the other hand, further limitations may be related with the type of design employed in these studies. Since we are basing our interpretation in a correlational design, it is impossible to be certain that the relationship between the variables at hand is as we hypothesized. For instance, based on previous research (Lima, 2006), we suggested in our moderation model that procedural justice acts as a predictor of attitudes towards new projects, and that local identity is an important moderator of this effect. However, other authors suggest that these relationships can also occur in the opposite direction. For instance, there is some evidence showing that attitudes may also influence individuals' perceptions of justice regarding a certain project, particularly in situations where individuals' identities are violated (Folger, 1977; Folger, Rosenfield, Grove, & Corkran, 1979; Mayer, Greenbaum, Kuenzi, & Shteynberg, 2009). One possibility that has been discussed in existing literature is that the direction of the relationship between perceived justice and attitudes may be

determined by the phase of a project. In this regard, some studies (Folger, 1977; Folger, Rosenfield, Grove, & Corkran, 1979; Mayer et al., 2009) suggest that the influence that individuals' attitudes may have on their justice perceptions is based on a motivation to reduce the dissonance between individuals' attitudes and the actual outcome and, in this sense, it requires individuals to know the outcome of the project. Hence, we should not expect an influence of attitudes on perceived justice in the earlier phases of a project. In fact, during the consultation phase of a project, people usually have little information about its final outcome (i.e., if it will or will not be built, what its impacts will be) and, in this case, the way in which they perceive the processes related with the project may act as a cue to their positioning towards the project. Hence, it seems that, at least in earlier phases (such as in the case of the studies reported in this paper), it is more likely that individuals' perceptions of justice influence the attitudes towards new projects than the other way around. We believe that an interesting way to test these ideas would be to conduct a longitudinal study, starting during the project phase and ending some years after its implementation. This would help us understand how individuals' attitudes and perceptions of justice interact in different moments of the project, and how this relationship is influenced by local identity.

Finally, a further point that warrants some exploration is connected with the nature of the moderation relationship established by local identity. In this regard, some studies suggest that it is not merely the strength of local identity that matters, but also its content specificities (Devine-Wright & Lyons, 1997). For instance, Lima (2004) has shown that different place conceptions, built upon different place characteristics, can underlie the same levels of local identity. Since local identity has different sources, we may expect that it will influence individuals' attitudes and

behaviours in different ways. We believe that this is an important prediction, and one that should be further explored in future studies. We think that the main effect of local identity on attitudes is also of significant interest for future studies. In fact, the present study seems to suggest that whereas it seems to have a role in the Alvito case, this is not the pattern in the Fridão case. The fact that we had different significant effects of the variables years of residence and property ownership in the two cases also suggests that different processes may be occurring. Given that these two variables should have an important relationship with local identity further testing of this issue would also be important in the future.

The implementation of a large-scale project in any given community carries important socioeconomic consequences. The degree in which local communities perceive the decision-making process as fair is directly associated with attitudes towards the project (e.g. Lima, 2006; Pligt, 1992). In a significant way, these studies suggest that individuals' interests and values should be taken into account from early stages of project management, following a truly inclusive view of the communities (Lima, Moreira & Marques, 2012).

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Figure 1.

Study 1 - Effects of local identity and procedural justice on attitude towards Alvito dam.

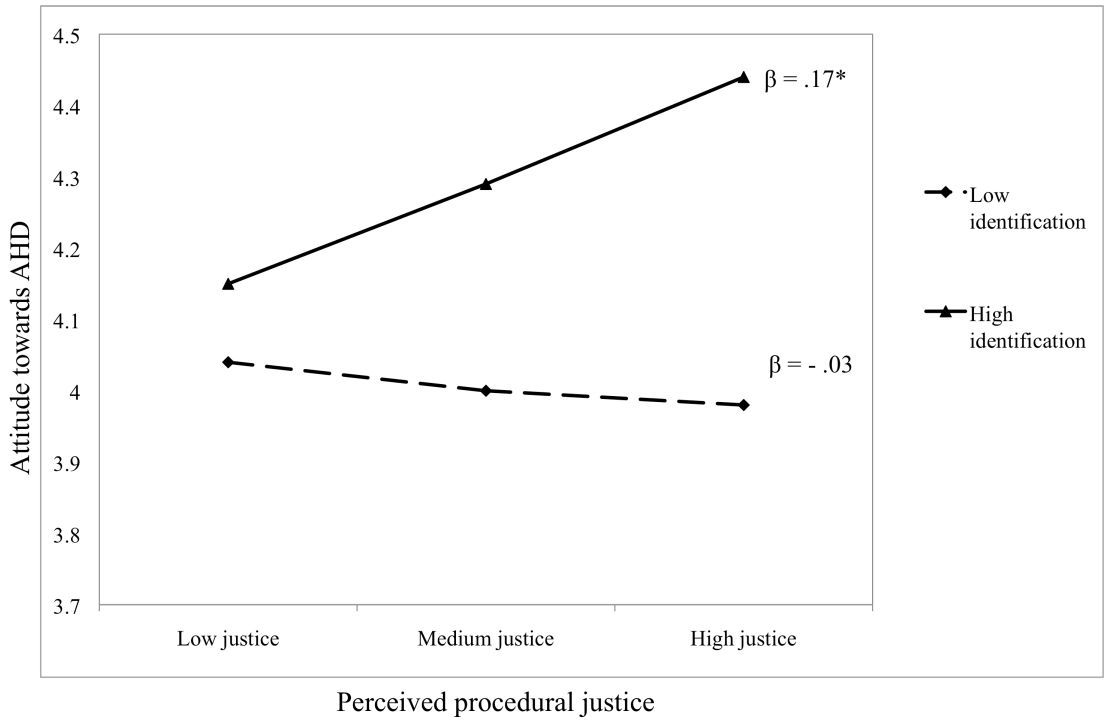

Figure 2.

Study 2 - Effects of local identity and procedural justice on attitude towards Fridão dam.

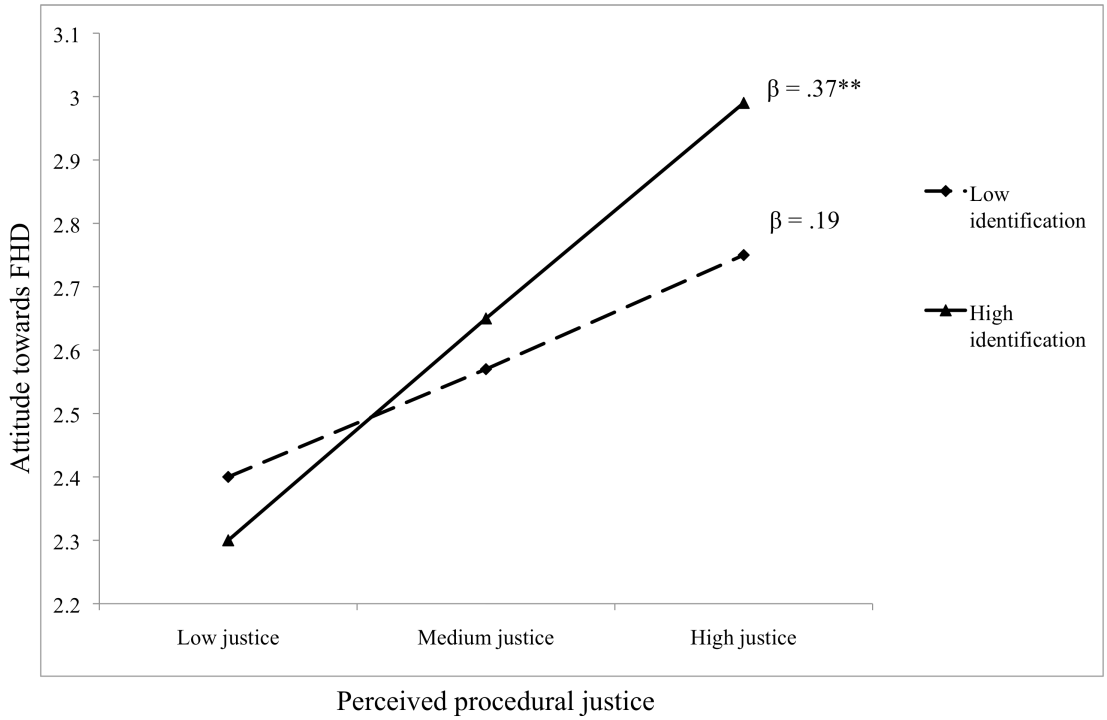

Table 1

Study 1 - Descriptive statistics and correlations between the key variables

Variables	1	2	3	4	5
1. Attitude	-	.39**	.30**	.17	.18**
2. Perceived trust	-	-	**.21****	.10	.24**
3. Expected outcomes of the project for the region	-	-	-	.15	- .01
4. Procedural justice	-	-	-	-	.15
5. Local identity	-	-	-	-	-
Mean	4.09	3.49	3.80	3.03	4.33
Standard Deviation	0.70	0.68	0.44	0.87	0.59
Min	1	1.67	1.80	1	2.50
Max	5	5	5	4	5
N	228	214	241	170	246

*$p < .05$. **$p < .01$

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