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no. 27 Procedural Justice as a component of the Not In My Backyard (NIMBY) syndrome: Understanding opposition to the building of a desalination plant in Victoria, Australia

Tanya J. King and Kristina Murphy
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Tanya J. King and Kristina Murphy
The Alfred Deakin Research Institute Working Papers

SERIES TWO

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Procedural Justice as a component of the Not In My Backyard (NIMBY) syndrome: Understanding opposition to the building of a desalination plant in Victoria, Australia

ABSTRACT

A desalination plant is currently under construction near Wonthaggi, in Victoria, regional Australia. Protesters living near the plant have been negatively labelled ‘NIMBYs’, or people who selfishly and irrationally/ignorantly oppose proximate developments that benefit the wider community. This paper critiques both the concept of NIMBY, as well as the assumption that opposition is demonstrated only by protest behaviour. Drawing on a 2010 survey, we show that opponents who live close by are indeed more likely to protest, although proximity to the site does not influence attitude, while concerns about ‘procedural justice’ are significant in predicting both attitude and protest behaviour.

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Introduction

This paper presents a case study from Wonthaggi, in Victoria, Australia, where vocal regional opposition to the siting of a reverse osmosis water desalination plant has taken the form of local protests, marches in the State capital, petitions, the occupation of building sites, letter writing and legal injunctions. This protesting has been documented extensively in the media, with the debate characterised as being between those who are ‘for’ the plant and those who are ‘against’ it. Opponents have been negatively labelled by some as ‘NIMBYs’ (Brennan 2008), or people who have a selfish, Not In My Backyard attitude. The following comment is from a blogger reflecting on the protesters (DirtyBallast 2007):

The media focus has been on the whinging NIMBYs of the region. Why is it that the affected residents choose to be so selfish? Why is it that the people of the region as a whole... prefer to contribute nothing to society for the greater good?

These words capture the essence of NIMBY: uninformed and self-interested negativity towards a broadly beneficial social good, directly related to the distance of opponents from the infrastructure in question. As well as denoting an attitude, the acronym ‘NIMBY’ is used as a name for those people who are unsupportive of a development in their region; as the words above suggest, the label NIMBY is an unflattering one.

The term is widely used in public discourses around the erection of, for example, windfarms, airports and recycling centres, and is a cultural label that has been considered at some length by social scientists interested in opposition to public infrastructure (Devine-Wright 2005; Groothuis and Miller 1994; Lober 1995a; Lober and Green 1994). The term also has currency in formal government and industry circles, and is presented as an identifiable challenge to those attempting to implement change; advice to the Australian government explicitly names the NIMBY factor as being an impediment to the introduction of innovations in, for example, municipal water treatment strategies (CSIRO 2001:79), renewable energy (Needham 2008:23) and non-fossil fuel energy technology (Commonwealth of Australia 2005:80). The cost of NIMBYs to governments and industry can be temporal (eg. delays in construction due to protesting or injunctions), financial (eg. the expense of these delays, or of legal battles with opponents), and political (eg. compromised legitimacy and negative publicity for governments and industry).

This paper unpacks the idea of NIMBY using both qualitative and quantitative data from research on the Wonthaggi desalination plant protests, gathered via a survey of Victorians which included a saturation of those living within a 20km radius of the site (see Method). We use distance of residence from the plant as a proxy for those most likely to be labelled NIMBYs. Our analysis challenges the notion that those who live closer to the desalination plant are more likely to have a negative attitude to the plant, a finding which brings into question the plausibility of NIMBY as an explanation for local opposition. In this paper we draw on three aspects of the data to inform our conclusions. First, while those closer to the plant are, indeed, more likely to actively protest (eg. sign petitions, attend rallies), distance from the plant was not found to influence attitude (ie. whether or not someone supported the development). The assumption that negative attitudes towards the desalination plant are only held by those who actively protest is not supported by the data, and a careful distinction should be made between ‘protest behaviour’ and ‘attitude’. Governments and industry that equate a lack of protest activity with support are doing so in error; an accurate assessment of support requires attention to more than just the overt signs of opposition. Second, rather than distance, we found that a key predictor of support for the plant is the perceived fairness of the plant development process and the trustworthiness of the Government. So, regardless of where in Victoria someone lives, they are more likely to express a positive attitude toward the desalination plant if they perceive that the implementation process was fair. We assess ‘fairness’ using the social psychology concepts of ‘procedural justice’ and ‘distributive justice’. Our third key finding was that procedural justice was more important in predicting support for the plant than distributive justice, or whether or not people felt that the desalinated water would be shared fairly.
We begin by outlining NIMBY and considering the assumptions and shortcomings of the concept, before introducing a discussion of procedural and distributive justice. Then, we introduce the case of the Wonthaggi desalination plant, including some of the factors that are relevant to the protests against the plant. Next, we give an account of the public response to the plant announcement and building process, drawing on qualitative data from survey respondents as well as the words of those who contributed their opinions in the press. We then outline the statistical data which supports our findings.

**NIMBY**

A ‘pure’ case of NIMBY is one in which a person agrees with the need for a project – be it a waste treatment plant, a windfarm, or a desalination plant – but they prefer it to be located in someone else’s neighbourhood. The acronym is often used in conjunction with another, LULU, or Locally Unwanted Land Use. NIMBYs tend to be identified by their physical distance from a planned LULU, though it is hardly surprising that those negatively affected by something are more likely to express a negative opinion about it than those who are not affected at all (Lober 1995a:511). In some of the literature, potential NIMBYs weigh the costs and benefits of having a particular infrastructure in their region (for example, increased employment versus noise pollution), and base their support on the outcome of a self-interested cost-benefit analysis (Lober 1995a:500). A person displaying a NIMBY attitude tends to be characterised as either selfish – preferring to reap the benefits of infrastructure located in someone else’s backyard – or as ignorant and irrational about the potential risks of a new technology. Freudenburg and Pastor (1992) explain that NIMBYs are often depicted as a combination of both selfish and ignorant. They cite DuPont who dismisses anti-nuclear protestors as sufferers of ‘phobic thinking’ (Freudenburg and Pastor 1992:42), and Keeney and von Winterfeldt, who lament the ‘selfish reasons’ (Freudenburg and Pastor 1992:43) driving those who oppose new developments.

As you may suspect, the term NIMBY has become a disparaging term for anyone who opposes new technologies, for whatever reason, and is sometimes paired with other unflattering terms such as NIABY (Not In Anyone’s Backyard), BANANA (Ban Anything Near Anything Near Anything) and CAVE (Citizens Against Virtually Everything) (Schively 2007:255). Given the understanding of NIMBY responses to LULUs as based on selfishness and ignorance, responses to opposition have tended to involve education campaigns (to counter the ignorance), and forms of compensation for those affected by a LULU (to balance the pros and cons) (Inhaber 1998).

Some research suggests that the NIMBY approach is overly simplistic and unable to account for the complexity of human attitudes and behaviours (Wolsink 1994; Wolsink 2006a), much less the variety of political, historical, economic, and environmental circumstances in which new technologies and infrastructures are implemented. The characterisation of protesters as selfish and ignorant or irrational requires critique, as these labels are contestable. We will address each, briefly, in turn.

**NIMBYs as ignorant/irrational**

Transferring complex technical information from experts to lay publics is notoriously difficult (Bell, et al. 2009; Felt, et al. 2007; Harwood and Schibeci 2008; Schibeci and Harwood 2007; Schibeci, et al. 2006), and requires more than just the exchange of information. Ways of talking or writing, assumptions about social and cultural values, and differences in what people perceive to be the relevant information, frustrate communication. For example, a community that says they do not understand the desalination process may be indicating that they want to know how a plant will impact on their short, medium and long-term water access, or the affect a desalination plant will have on marine life, while scientists may consider membrane technology (a key component of the desalination process), the most salient aspect. The roll-out of education and public relations campaigns assume that once people in the community understand a project or a new technology like the experts do, they will be more likely to accept it (Lawrence, et al. 1997:582; Smith and Free 1996). While there is certainly some basis for the argument that people are more likely to accept that
which they understand (Dolnicar and Hurlimann 2009; Dolnicar, et al. 2010; Hurlimann 2008; Roseth 2008), this blanket argument has often translated into responding to any opposition with more, and more simplified, scientific information. As Syme and Nancarrow suggest (2008:236-7):

…it is frequently believed that… community preferences, feelings, and attitudes… are likely to change once the policy has been put in place and people recognize the wisdom of the planners.

As this quote hints, this approach can result in protestors feeling like they are being patronised, or that their opposition has been ignored or dismissed. As we will discuss, below, the attitudes of local stakeholders towards the consultation process involved in the planning and implementation of a LULU is critical to support for that project.

**NIMBYs as selfish**

The other characteristic ascribed to NIMBYs is ‘selfishness’. The Hobbesian assumption that people are basically self-interested is evident in the motivations attributed to those who oppose LULUs, including the Wonthaggi desalination plant (eg. first quote in this paper). However, the notion that people are selfish has long been contested. The belief that humans will harvest resources selfishly is well entrenched in the natural resource policy literature, thanks in large part to the continued popularity of the Tragedy of the Commons model, published in 1968 by Garret Hardin (1968). Hardin suggests that logical individuals in an open access environment, who are not compelled by social pressures, will harvest natural resources in a way that is detrimental for the group and the resource as a whole. According to the model, tragedy will befall a limited resource because each individual will take as much as they can in the belief that everyone else will do the same. Hardin’s original paper discusses a hypothetical set of circumstances in which the resource is 1) open access (as opposed to common property or communally owned private property), 2) is limited or is perceived as being limited and 3) in which no social pressures compel people to limit their consumption. Such conditions can be easily assembled in a laboratory setting, as has been done extensively by psychologists specialising in game-theory (Camerer 1997; McCabe, et al. 1996; Scharlemann, et al. 2001). However, such conditions rarely occur in real life, and proponents of the Tragedy of the Commons theory have attracted much criticism for overstating the predictive capacity of the model (eg. Ciriacy-Wantrup and Bishop 1975).

The question of human ‘selfishness’ has been addressed extensively in the common property resource (CPR) literature, notably by recent Nobel Prize winner, Elinor Ostrom (Berkes, et al. 2003; Committee on the Human Dimensions of Global Change and National Research Council 2002; Dietz, et al. 2003; McGoodwin 1990; Ostrom 1990; Ostrom 2009; Ostrom, et al. 1994; Poteete, et al. 2010). Through a combination of laboratory based testing and field research Ostrom has, for some decades, demonstrated that the contexts in which people genuinely behave selfishly are rare. The first key to Ostrom’s argument is that there is a huge difference between resources that are common property and those that are open access, and while Hardin’s model refers to an open access scenario, most resources are common property. The second key to Ostrom’s argument is that people are motivated by a complex set of factors, including social pressure and perceptions of social norms, including intergenerational fairness, in situations of imperfect knowledge and multiple, sometimes competing, externalities. In contrast to the pessimistic picture painted by the Tragedy of the Commons model, in Hardin’s own words, ‘mutual coercion, mutually agreed upon’ (Hardin 1968:1247) constrains selfish behaviour. People exert social pressure on each other, or they try to, in order to compel cooperative, not self-interested, behaviour; people behave as if fairness matters.

In summary, the two key components of the NIMBY attitude, ignorance and selfishness, are contested. Furthermore, those who oppose the NIMBY classification argue that the contexts in which people oppose LULUs are far more complex than the NIMBY explanation allows. For example, research suggests that the perceived need for a project, valid concerns about environmental and human safety, existing trust in government, political persuasion,
the political history of a region, and the perceived fairness of the process whereby a project is implemented, are all relevant to how readily a project is accepted (Brion 1988; Gross 2007; Guidotti and Abercrombie 2008; King 2010; King & Murphy 2009; Lawrence, et al. 1997:584-5; Lober 1995a; Schively 2007; Sjöberg and Drottz-Sjöberg 2001; Wolsink 2006b). The last of these, the perceived fairness of the project implementation process, arises repeatedly in criticisms of NIMBY (Wolsink 2006a).

Procedural Justice and Distributive Justice

Distributive justice is concerned with the satisfaction people feel towards a process of sharing goods, and occasionally costs. Allocations that are seen to be ‘equitable’ (each party receives an equal share) or ‘fair’ (everyone gets what they deserve), are deemed more acceptable than those that are perceived as neither (Syme, et al. 1999:52-3). Procedural justice research tells us that people are not motivated to respond to the decisions of authorities solely according to what they stand to gain or lose. Their response is significantly influenced by how equitable they think the decision making process is, how fairly they feel they have been treated, whether or not they feel their views have been ‘heard’, and how well the outcomes accord with their social values (Lind and Tyler 1988; Murphy 2003; Murphy 2004; Thibaut and Walker 1975; Tyler 1989; Tyler 1990; Tyler 1997; Tyler 2000).

Procedural justice has a number of subsets in the literature. One component important to our study is that of ‘voice’, a concept more commonly articulated by protestors and other stakeholders as ‘consultation’. ‘Non-instrumental voice’ refers to when a stakeholder has the opportunity to comment on a decision, albeit in a capacity which has no bearing on the outcome. ‘Instrumental voice’ refers to when a stakeholder’s opinion may be taken on board during the decision making process. While both are important to procedural justice, stakeholders tend to feel more satisfied when they feel their opinions could have made a difference, even if the ultimate result did not benefit them, personally (Lind and Tyler 1988). Other important components of procedural justice relate to how stakeholders judge the respect and politeness of government representatives, the fairness or transparency of the process, and the historical trustworthiness of the decision makers (Guidotti and Abercrombie 2008; Lawrence, et al. 1997).

Much of the international work on procedural justice has concerned the attitudes of the public towards police and other authority figures (Greenberg 1990; Murphy 2004; Tyler 1990). Procedural justice in Australia has mirrored this trend and has been largely applied to cases of policing and tax fraud (Murphy, 2003; Murphy 2004; Murphy & Cherney, 2011). International procedural justice work in environmental contexts, primarily in North America and Europe, have largely been limited to studies of siting of waste disposal and recycling facilities (Ebreo, et al. 1996; Fletcher 2003; Upham and Shackley 2006), and renewable technology, particularly wind farms (Devine-Wright 2007; Krogh 2011; Zoellner, et al. 2008).

The link between NIMBY and perceived process fairness, as well as trust in government, has been considered by some of the literature (Bullard 1990; Bullard and Johnson 2000; Greenberg 2009:1244; Hunter and Leyden 1995; Lindell and Earl 1983; Lober 1995b; Luloff, et al. 1998:85; National Academy of Engineering 1986). On the whole, however, the NIMBY literature that addresses fairness focuses on the equitable distribution of costs and benefits from a project, or distributive fairness (Inhaber 1998; Lehr and Inhaber 2003). Our data demonstrates the value of looking at procedural justice separately from distributive justice; we take up Lober’s (1995) call for a closer investigation of perceived procedural fairness in cases where NIMBY is deemed to be the principal motivator, and echo those who argue that NIMBY is a simplistic explanation for public opposition to natural resource infrastructure decisions (Wolsink 2000).

With the exception of Gross’s (2007) work on the siting and development of wind-farms in NSW, Australian research on perceived fairness in disputes over environmental developments have tended to be combined with considerations of distributive justice; how water is allocated between irrigation farmers, towns, the environment and other stakeholders has dominated analyses of fresh water conflict (McCreddin, et al. 1996; Nancarrow and
Even Gross, who conducted one of the few procedural justice and environment studies in Australia which did not involve the distribution of resources notes: “Environmental disagreements share common characteristics which include how decisions are made and how public goods … and environmental burdens … are distributed” (Gross 2007:2727-8). While deciding who gets what is important, such studies tend to combine general implementation processes with attitudes towards the outcomes of distribution decisions. Such conflation, confusion and imprecision of terms is not uncommon, and perhaps unavoidable, in discussions about environmental justice, as Walker and Bulkeley (2006:656) note in their editorial preface to a collection on environmental justice. They muse: “The term “equity”, rather unhelpfully, too easily slips in its use between the descriptive sense of inequality, and the normative sense of justice, providing a further complication for the search for clarity in language and meaning” (ibid). Given the inherent subjectivity of ‘fairness’ (Low and Gleeson 1998), assessing procedural justice in scenarios where those affected gained something from the process under consideration (for example, more water), may have tempered the demonstrable affect of procedural justice in studies where distributive justice was also under consideration. Indeed, procedural justice scholars have found that the procedural justice effect is more pronounced in situations where the outcomes for people are negative rather than in cases where an unfair processes may be overshadowed by a resource windfall (Lawrence, et al. 1997:580; Lind and Tyler 1988).

The data presented below does address distributive justice, as an attitude to how future desalinated water is to be shared between residents of Wonthaggi and the rest of Victoria, particularly the capital city, Melbourne. We highlight distributive justice primarily in order to bracket it off from our key focus: procedural justice, and its relationship to NIMBY. Given the repeated reference to issues of “fairness” in NIMBY studies, it seems that investigating the role of procedural justice within a NIMBY framework can address both one of the shortcomings of NIMBY, as well as offer a more refined understanding of procedural justice, as it stands alone from distributive justice. Considering procedural justice in a situation where a small group of dissatisfied people are vocally opposed to a development that will not provide them with any quantifiable benefits in the form of water or money, may yield more robust procedural justice data than that demonstrated in Australia to date.

Wonthaggi case study

In 2003, the Victorian State Government of Australia released a green paper, Securing Our Water Future (Victorian Government 2003). The Government noted its’ intention to monitor the technological advances in desalination technology that were anticipated to significantly reduce the cost of the process. However, it was noted that ‘removing salt is energy intensive and it is likely that recycling “waste” water will continue to be the better option with a smaller environmental footprint’ (Victorian Government 2003:54). In the 2004 white paper, Securing Our Water Future Together (Victorian Government 2004:120), the Government announced that they would ‘investigate the environmental, social and economic costs and benefits of large-scale application of desalination’. By the following year they had found ‘desalination … to be a financially and technically feasible alternative water supply option’, while noting that there were environmental concerns about the about the amount of energy required to power desalination and the disposal of the brine produced during the process (Victorian Government 2005:40). By early 2007, speculation about the site to be chosen for a desalination plant named Wonthaggi, Port Philip Bay, Westernport Bay and the Geelong Surf Coast near Torquay (Kleinman 2007a; Wallace 2007). On June 19 2007, the Government
announced Wonthaggi as the chosen site for the Victorian reverse osmosis desalination plant. At the time of writing the building of the plant is behind schedule and is due for completion in 2012 (Aquasure 2011).

Wonthaggi is a regional centre of around 6,500 people, surrounded by a number of smaller villages including Inverloch, Kilcunda and Venus Bay, in a Shire of around 25,000. The town is located 128 kilometres southeast of Melbourne, in a regional area historically known for its hosting of a black coal mine and significant union activity around the turn of the 20th Century. More recently the area has become a sea-change and tourist destination, partly due to its proximity to Melbourne, surf beaches, endemnic marine species, and coastal beauty. In 2002, after a highly politicised public campaign (King 2005) the State Government significantly expanded Marine Protected Areas (MPAs) in Victorian waters, and the area now has four reserves: Bunurong Marine Park, Bunurong Marine National Park, Bunurong Coastal Reserve and Kilcunda-Harmers Haven Coastal Reserve (Department of Sustainability and Environment 2008:2). The desalination plant site itself is located out of the Wonthaggi township, near the mouth of the Powlett River, adjacent to the Kilcunda-Harmers Haven Coastal Reserve, and 15 kilometres from the Bunurong Marine National Park (Department of Sustainability and Environment 2008:4).

Method

Participants and Procedure

In July 2010, a total of 1515 residents of the state of Victoria in Australia were sent a letter and survey inviting them to participate in a study about the environment and water availability. The sample for this study called for a sample of people living in the immediate area affected by the Wonthaggi desalination plant and a comparison sample of Victorian residents. To meet the first requirement, 759 people living in settlements located within a 20 kilometre radius of the desalination plant were randomly selected from the Australian electoral roll. An additional sample of 756 Victorians was drawn from the electoral roll at random, irrespective of their location in the State of Victoria. Given that voting is compulsory in Australia, all Australian citizens in each State and Territory are required to register their name and address with the Australian Electoral Commission when they turn 18. When people move address, they are required by law to change their contact details on the Electoral roll within a 2 week period. Hence, we were confident that this sampling process would result in a representative sample of the two regions (i.e., Wonthaggi and the whole of Victoria).

The survey process was modelled on the Dillman Total Design Method (Dillman, 1978). This method provides for an attractive survey booklet with clear question layout and for multiple mailings to be made to non-respondents over a specified period of time. During the survey administration period, non-responders were contacted up to four times by mail, with a letter reminding them to participate in the project. The last survey return was received in early 2011, by which time a total of 468 useable responses had been received. In all, 53 explicit refusals were received from individuals by post, telephone, or email. A further 10 surveys were returned blank or partially completed (these were not included in the analysis). Overall, a raw response rate of 31% was achieved. After taking into account out-of-scope survey recipients who were unable to complete the survey due to death, illness or who had not updated their contact details on the electoral roll (N=140), an adjusted response rate of 34% was obtained. The response rate for residents living in the Wonthaggi region was somewhat higher than for those living in the rest of Victoria (37% vs 25% respectively). We presume that this effect is due to increased salience of the topics contained in the survey to persons in the Wonthaggi district.

The sample appeared to be generally representative of the overall Australian population, according to 2006 Census data, although those born overseas were slightly under-represented relative to population figures. Respondents were between 18 to 91 years of age \( (M = 57.25, \ SD = 16.01) \), 48% were male, 81% indicated that they were born in Australia\(^2\), 71% were married, and the average family income was reported to be AUS$68,517\(^3\) (SD =
No major differences on demographic variables were found between respondents from the Wonthaggi region and those not living in the region, apart from those living in the Wonthaggi region earned less than the rest of the sample.

**Questionnaire**

The survey was an 18 page self-completion questionnaire booklet of B5 size, containing approximately 240 questions. The questionnaire primarily included a number of psychometric scales covering such topics as: views about environment and water; attitudes to water restrictions imposed by the Victorian government; attitudes about the government and its environmental policies and processes; thoughts on the Wonthaggi desalination plant; the impact of environmental infrastructure on society and them personally; trust in government; and connection to the local community. The questionnaire also contained questions about the Wonthaggi desalination plant, and included a comprehensive set of background variables covering the respondent and their family situation. For the purposes of the present study, however, only questions relevant to the following categories of variables were utilised: 1) procedural justice; 2) distributive justice; 3) general attitude to the Wonthaggi plant; 4) public action taken against the plant; and 5) control variables. Appendix 1 presents the individual items used to construct each of these categories of variables.

A principal components factor analysis using varimax rotation was conducted to test for the assumed conceptual differentiation between the main variables of interest to this study. The analysis yielded a three-factor solution, explaining 64% of the variance. Appendix 2 presents the results of this factor analysis, which generally supported the expected factor structure. Factor 1 consisted of nine items which measured procedural justice, Factor 2 consisted of six items that measured public action, and Factor 3 comprised five items that measured both general attitudes towards the plant and distributive justice.

**Procedural justice**

The 9-item procedural justice scale assessed whether respondents believed the processes the Victorian government uses when dealing with the public in relation to environmental issues are fair (e.g., ‘The Victorian Government tries to be fair when making decisions’). The items were based on the work of Tyler (2006) and they measured four aspects of procedural justice: voice; respect; trustworthiness; and fairness. Items were measured on a 1 (strongly disagree) to 5 (strongly agree) scale, with higher scores indicating greater levels of perceived procedural justice.

**Distributive justice**

As noted earlier, distributive justice refers to the fair distribution or allocation of resources across different groups of people. Distributive justice in this study was measured via a 2-item scale which referred specifically to the amount of water residents would receive from the desalination plant (e.g., ‘Once the desalination plant is operational, we will all benefit from access to more water’). Items were again measured on a 1 (strongly disagree) to 5 (strongly agree) scale, with higher scores indicating greater perceptions of distributive justice.

**Attitude to plant**

Three separate questions were used to assess respondents’ general attitude toward the Wonthaggi plant. One question assessed ‘acceptance’ of the plant (‘I willingly accepted the Victorian Government’s decision to build the Wonthaggi plant’; 1=strongly disagree to 5=strongly agree); one question assessed ‘satisfaction’ with the Government’s handling of the issues surrounding the approval and siting of the plant (‘How satisfied are you with the Government’s handling of the issues surrounding the approval and siting of the plant?’; 1=very dissatisfied to 5=very satisfied); and one question assessed respondents’ general attitude toward the plant (‘Overall, how would you describe your attitude toward the Wonthaggi desalination plant?’; 1=extremely negative to 5=extremely positive). The results of a factor analysis (see Appendix 2) indicated that these three questions measured one concept, so a general attitude scale was created with these three individual items; a
higher score on the scale indicates a more positive disposition toward the plant and the Government’s decision to site the plant in Wonthaggi.

Public action
Active resistance against the Wonthaggi desalination plant was measured by asking survey respondents to indicate whether they had taken any political action in relation to the plant. Six different types of action were listed (e.g., took part in a rally; contacted a local politician) and respondents were asked to indicate whether they had taken this action in relation to the plant (yes or no). The number of ‘yes’ responses given to these six statements was summed to form the public action index; higher numbers on this index indicate greater involvement in action.

Control variables
In addition to those variables mentioned above, a range of demographic control variables were also utilised to control for individual differences in the sample. These variables included the age, sex (0=male; 1=female), education level (1 ‘no schooling’ to 10 ‘postgraduate university degree’), and household income of respondents. Also measured was how environmentally aware respondents considered themselves to be (‘I consider the environmental consequences of my every decision’; 1=strongly disagree to 5=strongly agree). Environmental awareness was included as a control variable to ascertain whether those who were more environmentally conscious were more or less likely to express negative opinion toward the plant and the Victorian government’s handling of the processes surrounding the plant. In addition to these variables, a dummy control variable labelled ‘distance’ was also created to distinguish between respondents living in Wonthaggi and those living elsewhere in Victoria (0=Wonthaggi (N=278); 1=others (N=186)). This ‘distance’ variable was created as a proxy to measure the possible NIMBY effect that the plant may have had in shaping respondents’ attitudes and behaviours toward the plant.

Results – Quantitative

Descriptive Statistics
Table 1 presents the means and standard deviations for each of the 10 survey measures used in this article. Table 1 also presents the Cronbach reliability coefficients for each measure, and the bi-variate relationships between the measures. Before proceeding to discuss the findings, it should be noted that only 10 survey respondents were unaware of the Wonthaggi desalination plant. Hence, we can be confident in claiming that those living further away from the plant were just as able to offer their opinions regarding the plant as those living nearer to the plant.

It can be seen in Table 1 that the mean scores for both the procedural justice and distributive justice scales were slightly below the midpoint of the 5 point scale, suggesting that respondents were somewhat critical of the fairness of the Victorian Government’s processes regarding environmental issues, and also whether the desalination plant itself would provide fair water allocations across different areas in Victoria. The general attitude people held about the plant was also somewhat negative. It can also be seen that people considered themselves to be quite environmentally aware. Finally, Table 1 shows that the average level of political action taken by respondents was quite low. These particular findings are interesting, because they suggest that people can hold quite negative attitudes toward new infrastructure, yet do very little about it in the way of public action. This disjuncture between attitude and behaviour has been found in the literature previously (e.g. Lober 1995a).

The bivariate relationships between the measures also reveal some interesting findings. Specifically, Table 1 shows that people who were more likely to think the government uses procedural justice when dealing with environmental issues were more likely to hold positive attitudes toward the Wonthaggi plant. They were also more likely to anticipate that the distribution of resources the plant would provide would be fair. Perceptions of procedural justice were also related to political action, with those seeing the process as more fair being
Those respondents who also held a more positive attitude about the plant were much less likely to take political action against the plant. While empirical research has shown that attitudes do not necessarily always predict behaviour (Crespi, 1971; Fazio, Chen, McDonald & Sherman, 1982), the findings of the present study suggest that there is quite a strong relationship between the two variables. Finally, the distance measure was found to correlate with a number of the variables. Specifically, those who lived outside the Wonthaggi region were more likely to perceive the Government to be acting in a procedurally fair way; they were more likely to see allocation of water from the plant to be distributed fairly, they held more positive attitudes toward the plant, and they were less likely to take action against the plant.

Table 1. Mean and standard deviation scores for each of the 10 core measures of interest. Higher scores represent more favourable evaluations. Also reported are the Cronbach alpha reliability scores for each scale and bi-variate correlations between the measures.

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>Cronbach α</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<td>.77</td>
<td>.93</td>
<td>-</td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. Distributive justice</td>
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<td>.95</td>
<td>.59</td>
<td>.42*</td>
<td>-</td>
<td></td>
<td></td>
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<td>3. Political action</td>
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<td>.87</td>
<td>-.35*</td>
<td>-.33*</td>
<td>-</td>
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<td></td>
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<td>4. Gen. attitude</td>
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<td>.57*</td>
<td>.57*</td>
<td>-.46*</td>
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<td></td>
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<tr>
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<td>-</td>
<td>.08</td>
<td>-.02</td>
<td>.10*</td>
<td>.02</td>
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</tr>
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<td>.03</td>
<td>.13*</td>
<td>-.05</td>
<td>.17*</td>
<td>.16*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>7. income</td>
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<td>.06</td>
<td>-.02</td>
<td>-.07</td>
<td>-.12*</td>
<td>-.33*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. education</td>
<td>5.76</td>
<td>2.31</td>
<td>-</td>
<td>.00</td>
<td>.11*</td>
<td>.17*</td>
<td>-.09</td>
<td>-.01</td>
<td>-.22*</td>
<td>.32*</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>9. sex (0=M; 1=F)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.04</td>
<td>-.08</td>
<td>-.00</td>
<td>-.09</td>
<td>.03</td>
<td>-.05</td>
<td>.08</td>
<td>-.05</td>
<td>-</td>
</tr>
<tr>
<td>10. distance (0=Wont; 1=other)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.22*</td>
<td>.39*</td>
<td>-.30*</td>
<td>.23*</td>
<td>-.06</td>
<td>-.07</td>
<td>.16*</td>
<td>.10*</td>
<td>.03</td>
</tr>
</tbody>
</table>

Note: * = p <0.05. All scales measured on a 1 to 5 scale; political action measured on a 0 to 6 index; higher scores indicate greater levels of procedural justice, distributive justice, political action, positive attitude to the plant, and environmental awareness, respectively.
Regression Analyses – Predicting general attitudes toward the Wonthaggi desalination plant

In order to examine whether negative attitudes toward the desalination plant were correlated with proximity or were more strongly linked to other factors, a regression analysis was undertaken in which a number of variables were considered as predictors of attitude toward the plant. In Step 1 of the analysis, the demographic background variables were entered along with the ‘distance’ variable, the environmental awareness variable and the procedural and distributive justice scales. A procedural justice x distance interaction term was then entered into the model at Step 2. An interaction term between distributive justice and distance was also entered at Step 2 of the model. A total of 49% of the variation in general attitude to the plant could be explained by the variables in the model.

Table 2 – OLS regression predicting attitude to the Wonthaggi Desalination Plant

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Step 1</th>
<th></th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
<th></th>
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<tr>
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<td>b</td>
<td>SE_b</td>
<td>β</td>
<td></td>
<td>b</td>
<td>SE_b</td>
<td>β</td>
<td></td>
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<td>Constant</td>
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<td>2.64</td>
<td>.28</td>
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<td></td>
</tr>
<tr>
<td>Distance (0=Wonth.; 1=other)</td>
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<td>.10</td>
<td>.04</td>
<td></td>
<td>.09</td>
<td>.10</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Education</td>
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<td>.02</td>
<td>-.09*</td>
<td>-.09</td>
<td>-.05</td>
<td>.02</td>
<td>-.09</td>
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</tr>
<tr>
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<td>-.01</td>
<td></td>
<td>.00</td>
<td>.00</td>
<td>-.02</td>
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<td>.00</td>
<td>.10*</td>
<td>.09</td>
<td>.01</td>
<td>.00</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>Sex (0=M; 1=F)</td>
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<td>.09</td>
<td>-.03</td>
<td>-.03</td>
<td>-.07</td>
<td>.09</td>
<td>-.03</td>
<td></td>
</tr>
<tr>
<td>Env. awareness</td>
<td>-.04</td>
<td>.05</td>
<td>-.03</td>
<td>-.03</td>
<td>-.04</td>
<td>.05</td>
<td>-.03</td>
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<tr>
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<td>.70</td>
<td>.06</td>
<td>.47**</td>
<td>.69</td>
<td>.06</td>
<td>.47**</td>
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<td></td>
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<tr>
<td>Distributive justice (DJ)</td>
<td>.39</td>
<td>.06</td>
<td>.32**</td>
<td>.39</td>
<td>.06</td>
<td>.32**</td>
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<td></td>
</tr>
<tr>
<td>PJ x distance</td>
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<td>.13</td>
<td>-.05</td>
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<td>.05</td>
<td>.11</td>
<td>.02</td>
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<tr>
<td>DJ x distance</td>
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<td></td>
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<tr>
<td>R²</td>
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<td></td>
<td>.51</td>
<td></td>
<td></td>
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<tr>
<td>Adjusted R²</td>
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<td></td>
<td>.49</td>
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<td>R² change</td>
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<td>.00</td>
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<td>F change</td>
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<td>.84</td>
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<td></td>
<td>2, 356</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.001
As can be seen in Table 2, education, age, procedural justice, and distributive justice predicted respondents’ general attitude toward the Wonthaggi desalination plant. Those who were more educated, and who were older were more likely to express negative attitudes toward the plant. Those who perceived the Victorian government to be using procedural justice in their environmental decision making were also more positively disposed to the plant. Those who were more likely to believe there had been distributive justice (i.e., a fair allocation of water from the plant) also held more positive attitudes to the plant. Interestingly, neither environmental awareness nor distance predicted general attitude to the plant. Those who considered themselves to be more environmentally aware did not hold more negative attitudes toward the plant than those who were not environmentally self-aware. As indicated by the insignificant ‘distance’ effect on attitude, those living closer to the Wonthaggi plant were not more likely to hold negative attitudes toward the plant. Such a finding questions a key component of the NIMBY explanation for the attitudes people hold toward environmental infrastructure projects; people do not make decisions about a development based on whether or not it is in their back yard. Instead, the findings suggest that when other factors are taken into account procedural and distributive justice issues are of more concern to people when formulating their opinions. Critics of these findings would argue that procedural justice and distributive justice would matter mainly to those living nearer to the infrastructure. However, the findings do not support this claim. The interaction between procedural justice and distance on general attitude to the plant was found to be insignificant. The interaction between distributive justice and distance was also insignificant. This suggests that procedural justice and distributive justice issues matter just as much to those living some distance from the plant to those living in the area directly affected by the plant. An important point to note from this analysis is that the dominant factor predicting attitude to the plant was the procedural justice measure.

Regression Analyses – Predicting public action against the Wonthaggi desalination plant

The second regression analysis we conducted aimed to explore what factors were important to predicting public action taken toward the Wonthaggi desalination plant. Demographic control variables were entered into the model at Step 1, so too was the distance variable, the environmental awareness variable, and the procedural and distributive justice variables. At Step 2, the ‘attitude to the plant’ variable was entered into the model. Finally, three interaction terms were entered at Step 3: 1) procedural justice x distance; 2) distributive justice x distance; and 3) general attitude x distance. This analysis resulted in a model that explained 35% of the variation in public action behaviour.
Table 3 – OLS regression predicting public action against the Wonthaggi Desalination Plant

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Step 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
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<td></td>
<td>b</td>
<td>SEb</td>
<td>b</td>
<td>SEb</td>
<td>b</td>
<td>SEb</td>
<td>b</td>
<td>SEb</td>
</tr>
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<td>.41</td>
<td>.42</td>
<td>.12</td>
<td>.41</td>
<td></td>
<td></td>
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<tr>
<td>Distance (0=Wonth)</td>
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<td>.14</td>
<td>.23**</td>
<td>.57</td>
<td>.13</td>
<td>.22**</td>
<td>.68</td>
<td>.13</td>
</tr>
<tr>
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<td>.03</td>
<td>.22**</td>
<td>.10</td>
<td>.03</td>
<td>.18**</td>
<td>.10</td>
<td>.03</td>
</tr>
<tr>
<td>Income</td>
<td>.00</td>
<td>.00</td>
<td>.06</td>
<td>.00</td>
<td>.06</td>
<td>.00</td>
<td>.00</td>
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<td>.00</td>
<td>.01</td>
<td>.00</td>
<td>.02</td>
<td>.00</td>
<td>.00</td>
<td>.05</td>
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<tr>
<td>Sex (0=M; 1=F)</td>
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<td>.02</td>
<td>.07</td>
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<td>.03</td>
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<td>.11</td>
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<td>.07</td>
<td>.12*</td>
<td>.15</td>
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<td>.11*</td>
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<td>.06</td>
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<td>Procedural justice (PJ)</td>
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<td>.26**</td>
<td>.18</td>
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<td>.11</td>
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<td>Distributive justice (DJ)</td>
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<td>.12*</td>
<td>.03</td>
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<td>General attitude</td>
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<td>.33</td>
<td>.07</td>
<td>.29**</td>
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<tr>
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<td>.19</td>
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<tr>
<td>DJ x distance</td>
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<td>.05</td>
<td>.16</td>
<td>.02</td>
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<tr>
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<td>.57</td>
<td>.14</td>
<td>.23**</td>
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<td>.06</td>
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<tr>
<td>F change</td>
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<td>27.90**</td>
<td></td>
<td>11.18***</td>
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<td>1, 353</td>
<td></td>
<td>3, 350</td>
<td></td>
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</tbody>
</table>

*p<0.05; **p<0.001

As can be seen in Table 3, a number of variables predicted public action. In Step 1 of the model, it was found that those who lived closer to the Wonthaggi plant, those with more education, and those who considered themselves to be more environmentally aware were more likely to take action in relation to the plant. Perceptions of procedural justice and distributive justice were also found to predict public action; those who thought the process was fairer and those who were more likely to feel the distribution of water from the plant would be fair, were less likely to take action. However, it can be seen from Step 2 of the model that the effect of both procedural justice and distributive justice on public action behaviour disappeared once the general attitude variable was considered, with those holding more positive attitudes toward the plant being less likely to take action. Such a finding suggests that the relationship between justice perceptions and public action is mediated by people's general attitudes. Two Sobel tests confirmed these mediation effects (z = -4.79, p<0.001 and z = -4.24, p<0.001 for procedural and distributive justice, respectively). As can be seen by the size of the coefficients at Step 2 of the analysis, the attitude variable appears to be more important than distance in predicting public action.

The final step of the model revealed a significant interaction between general attitude and distance on public action behaviour, but significant interactions were not revealed between
procedural justice and distance or between distributive justice and distance. The insignificant interactions between justice perceptions and distance indicate that people who live both in the Wonthaggi region and outside the region value procedural justice and distributive justice just as much as each other when predicting public action. In order to explore the nature of the general attitude x distance interaction effect, simple effects revealed that for those who lived in the Wonthaggi region, attitudes about the plant mattered a great deal for predicting their decision to take public action in relation to the plant ($\beta = -.40$, $p<0.001$). Specifically, those who were more negatively disposed toward the desalination plant were more likely to take public action. In contrast, for those who lived outside the Wonthaggi region, attitudes played no role in predicting action ($\beta = .02$, $p<0.87$).

Taken together, these findings suggest that distance from the desalination plant matters when determining who will or will not take public action. This may seem to justify the idea that NIMBY is an expression of attitude limited to those directly affected by an issue; regardless of why people protest – whether it be selfishness, ignorance, or something else entirely – those closer to the plant were more likely to take public action. However, attitudes and justice perceptions appear to matter more when predicting public action. Particularly interesting is the finding that procedural justice is just as important to those living some distance away from the desalination plant as it is for those in the Wonthaggi region for predicting both attitudes and behaviour toward the plant. The qualitative data from the survey, as well as other sources including newspapers, help to illustrate the quantitative findings.

**Results – Qualitative**

A considerable amount of media coverage accompanied the announcement of the Wonthaggi plant. Three themes emerged: environmental, economic and socio-political. The first two issues require little elaboration. Desalination is, by the Government’s own account, expensive, and environmentally challenging (Victorian Government 2003). Specifically, concerns were raised over the choice of site (Heislers 2008; Kleinman 2007b), the opting for desalination over alternatives such as recycling (Anonymous 2007; Fyfe 2009a) (ACIL Tasman 2007; Fyfe 2009b), the financial arrangements and costs (Millar 2009; Murphy and Gordon 2007), and the Government’s initial reluctance to undertake a full Environmental Effects Statement (EES) (Jackson 2007; Kleinman and Doherty 2007a). Concerns about the community consultation process (Cooke 2007; Kleinman and Doherty 2007b; Rood 2008) and the legitimacy and transparency of those involved in the plant planning and construction (Liberal Victoria 2010; Thomas and Robinson 2010), presented the third general category of media coverage. Both consultation, which bears directly on the procedural justice concepts of ‘instrumental voice’ and ‘non-instrumental voice’, and expressions of distrust in authority, also a key component of procedural justice, saturated expressions of dissatisfaction with the desalination plant.

The day after the announcement of the plant, then Victorian Premier Steve Bracks explained his understanding of the term ‘consultation’ to a group of angry Wonthaggi residents who expressed their shock and concern about the process. Bracks was quoted as saying (Rood 2008):

> We announced it yesterday and we are consulting now. I don’t know of any announcements that any governments make that they have a process before they make a decision and then have the consultation prior to that.

While somewhat convoluted, Bracks’s expressed understanding of consultation clearly identified the ‘voice’ of stakeholders as being ‘non-instrumental’.

Publics from around the State, not just the affected area, commented on the desalination plant. Of the relevant letters sent to the editor of Melbourne newspaper, *The Age*, between June 2007 and June 2010, less than 30 percent came from people in the Wonthaggi and surrounding regions. While 80 percent of the letters expressed negative sentiments about some aspect of the desalination plant, slightly more than a third of the negative letters were
from those living in the Wonthaggi region. While this suggests that people were slightly more likely to actively protest the plant if they were directly affected, it also indicates that the issue was relevant for people across the State. This finding is supported by our quantitative data in which procedural justice was found to be relevant to how people felt about the plant.

Many of those who contacted the media about, not only the desalination plant but about other aspects of the Bracks/Brumby water plan, expressed their ‘indignation about their treatment by the… Government’ (Rood 2008). Jenny Atkins, of Kilcunda, referred to “the complete lack of transparency and adherence to due process demonstrated by the Government in its handling of this project since the day it was announced” (Atkins 2007). The following examples from the qualitative data captured in our survey illustrate common themes about the consultation process, legitimacy and transparency of the Government, and ‘voice’ (i.e. procedural justice).

I feel that no matter what the public or any interest group wanted, the Victorian Government would have steamrolled the desalination project through, whilst appearing to be in a fair and honest consultation process.

There was absolutely no consultation with the public about the desalination plant or windfarms – no recognition of protests, no asking residents, no talk at all about other measures.

The process has been flawed from the start and from a Labor Government that should embrace community consultation.

There has been almost no consultation with the people here regarding the desalination plant and we have been told that it will go ahead regardless!

Looking back on that announcement period, The Age journalist, Melissa Fyfe, reflected (Fyfe 2010):

For what it’s worth, I think that the Bracks/Brumby government would have suffered a backlash in any community they chose to put the desalination plant. The wider issue, however, is that there was little consultation. The Bracks/Brumby government are actually very good at consultation but they cited the water crisis as a reason to abandon the normal procedural consultation process and have been copping it from the community ever since.

Those beyond the Wonthaggi region also expressed their dissatisfaction with the consultation process around the desalination plant, as these blog comments illustrate:

The government is happy to sell out Victorian beaches… And to top it off, they victimise protestors under the guise of [by depicting their opposition as] NIMBYism. I don’t even live in Wonthaggi, but I feel like getting behind the residents who are on the butt end of a very raw deal (williampitt 2009).

I am one of an increasing number of Melbourne residents who totally support south coast people saying “no” to desalination (Tait 2008).

What is clear from these comments is that issues of procedural justice – perceptions about the fairness and legitimacy of Government processes, and consultation or ‘voice’ – motivated protest behaviour in Victorians, and not only those residing close to the desalination plant. Our quantitative data supports these findings and provides further evidence that proximity to the plant can not be employed to predict attitude. Indeed, if we question the legitimacy of the assumption that NIMBYs are selfish and ignorant/irrational locals, as discussed above, we should then ask what it is that influences attitude and behaviour, and the role, if any, played by distance from the plant.
Discussion

This paper describes a case study of protest behaviour responding to the building of a desalination plant in Wonthaggi, southeast Victoria, Australia. We consider the representation of local protestors as those who hold a Not In My Backyard, or NIMBY attitude. The research offers a fresh critique of the NIMBY phenomenon. While NIMBYs tend to be represented as selfish and ignorant or irrational, the literature suggests that such an interpretation of motivations is unlikely to be strictly true. We go on to show that those who are given this label are not alone in their negative attitudes towards the Wonthaggi desalination plant, although they are more likely to express their views via public action. We have shown that propensity to protest is strongly linked to, but separate from, negative attitude, which in turn is highly correlated with justice perceptions, and particularly procedural justice.

Our research further extends the application of procedural justice into the environmental and natural resource management context in Australia. Further, by distinguishing between distributive and procedural justice we refine the application of justice measures to water management issues, which has, to date, concentrated on distribution concerns.

Given the significant insights into social attitudes and behaviour offered by procedural justice in other areas we anticipate that the current research program will provide valuable data relevant to development planners and Governments wishing to implement other unpopular projects. Accepting that those who protest Locally Unwanted Land Uses, or LULUs, are not the sole opponents, nor are they acting purely out of selfishness or ignorance, but responding to, primarily, procedural justice perceptions, opens up a whole new realm of possibilities for planners or policy makers as they undertake the important task of consultation. Indeed, our study suggests that the standard approach of anticipating or responding to opposition with education campaigns and compensation is less affective in shaping attitudes than issues of consultation, transparency and trust in the process. We are not arguing that education and compensation are unimportant, or that people are never selfish, ignorant or irrational. However, recognising that those labelled NIMBYs are likely to be primarily motivated by concerns about procedural justice, requires an altered response from policy makers, planners, governments and industry.
Appendix 1

This is a complete list of the measures used in the analysis of this paper. Items that were reversed scored for the purpose of analysis are indicated with an (r).

Procedural justice

1. The Victorian Government respects people’s rights when decisions are made
2. The Victorian Government treats all people fairly
3. The Victorian Government treats people with dignity and respect
4. The Victorian Government tries to be fair when making decisions
5. The Victorian Government listens to the public before making decisions
6. The Victorian Govt. makes decisions based upon facts, not their personal biases or opinions
7. The Victorian Govt. gives people the opportunity to express views before decisions are made
8. All citizens are treated politely by the Victorian Government
9. The Victorian Government uses fair procedures when deciding how to handle situations

Distributive justice

1. The desalination plant is only going to create new water for people living in the city (r)
2. Once the desalination plant is operational, we will all benefit from access to more water

General attitude to plant

1. I willingly accepted the Victorian Government’s decision to build the Wonthaggi plant
2. How satisfied are you with the Government’s handling of the issues surrounding the approval and siting of the plant?
3. Overall, how would you describe your attitude toward the Wonthaggi desalination plant?

Political action

Indicate what you did regarding the Wonthaggi plant:

1. Helped collect signatures for a petition
2. Took part in a rally/demonstration
3. Wrote to or contacted a Commonwealth politician
4. Wrote to or contacted a Victorian state politician
5. Wrote to or contacted a local politician
6. Wrote to or contacted a newspaper, TV or radio station
## Appendix 2

### Table A1. Factor analysis differentiating categories of variables

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Procedural justice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt respects people’s rights</td>
<td>.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt treats all fairly</td>
<td>.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt treats people with dignity/respect</td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt tries to be fair</td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt listens to the public</td>
<td>.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt uses fair procedures</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt makes decisions based on facts</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt gives people opportunity to express views</td>
<td>.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All citizens treated politely</td>
<td>.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Political action</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contacted State politician</td>
<td>.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contacted commonwealth politician</td>
<td>.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contacted local politician</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Took part in rally</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helped collect signatures for petition</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contacted media</td>
<td>.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. General attitude</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describe your general attitude to the plant</td>
<td>.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied with Govt handling of issue</td>
<td>.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepted Govt decision to build plant</td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Distributive justice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once plant operation, we will all benefit</td>
<td>.68#</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant will create water only for city</td>
<td>.63#</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>8.42</th>
<th>2.91</th>
<th>1.44</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explained variance</td>
<td>42</td>
<td>15</td>
<td>7</td>
</tr>
</tbody>
</table>

|                        | 42   | 15   | 7     |

**Note:** Extraction Method: Principal Components Factoring. Rotation Method: Varimax with Kaiser Normalization. Only factor loadings > 0.40 are displayed. # Denotes an item that loaded onto a different factor than expected.
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Endnotes

i Various other factors complicate the interaction between procedural justice and distributive justice. For example, Syme et al. (1999:54) note that in cases where people feel that resources should be divided equally between all stakeholders, the fairness of the process is not deemed to be as important as for those who think resources should be given to those who most deserve them.

ii One in four Australians are born overseas according to 2006 Census data (ABS, 2006).

iii At the time of writing, this equated to approximately US$67,715 or €49,821.