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# Conflicting Views on Fair Siting Processes: Evidence from Austria and the U.S.\*

Joanne Linnerooth-Bayer & Kevin B. Fitzgerald\*\*

## Introduction

The impasse in siting hazardous waste facilities is a policy problem of major significance throughout the industrialized world. No country can claim full success in the design of procedures for siting hazardous waste and other noxious facilities that promote social cohesion, trust and a sense of fair process and outcome.<sup>1</sup> This failure to allocate the costs and risks of needed waste facilities stands in marked contrast to other commonplace social burdens, such as jury duty, military service and even taxes, for which societies have institutions and procedures that are for the most part accepted as fair, or fair enough.<sup>2</sup>

The most recent and notable trend for siting locally unwanted facilities is away from hierarchical siting procedures, where the state or national government exercises the power of eminent domain, to voluntary siting procedures that give local residents the power of consent in the siting decision through referenda and other community choice mechanisms. By transferring property rights from the government to the local community, this voluntary approach empowers residents to bargain with developers to arrive at a mutually beneficial siting contract. Many view this as the logical and fair way out of the

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<sup>1</sup> Howard Kunreuther, Joanne Linnerooth-Bayer & Kevin Fitzgerald, *Siting Hazardous Facilities: Lessons from Europe and America*, in *Energy Environment and the Economy: Asian Perspectives* (P. Kleindorfer, H. Kunreuther & D. Hong, eds. 1996).

<sup>2</sup> Jon Elster, *Local Justice: How Institutions Allocate Scarce Goods and Necessary Burdens* (1992); and H. Peyton Young, *Equity in Theory and Practice* (1994).

siting dilemma, and they are frustrated and confused by the opposition voluntary approaches receive in practice.

The optimism and subsequent frustration with voluntary siting approaches stems from an incomplete conceptual framework of siting controversies, particularly their characterization as “not in my back yard” (NIMBY) problems. According to this characterization, concerns about the risks and benefits of a facility singularly determine political views and action. This means that the way out of the siting impasse, besides assuring that a facility is viewed as adequately safe, lies in voluntary approaches that give residents the right to bargain for more benefits in the form of compensation and community control.

The pitfall of this approach is that the citizens of the potential host communities, and the public more generally, are not concerned only about their risks and benefits, but also about procedures and outcomes for sharing a siting burden that they view as trustworthy and fair. Although some see the fair solution as one which fully compensates the neighbors, others view this market solution as an unfair strategy to place facilities in poor communities. Our main point is that what is viewed as fair differs among the population, and fairness cannot always be assured by an allocation where everyone enjoys more perceived benefits than costs. Renn et al.<sup>3</sup> suggest that the siting process should be one of norm generation or the creation of communitarian values and social preferences that transcend egoistic perspectives. We emphasize, however, the difficulties in generating commonly held norms. People hold strongly conflicting ideas of what constitutes a fair and trustworthy process and outcome, and, we suggest, these competing views about fairness are at the core of the siting impasse. Only by granting legitimacy to these different views will it be possible to construct a siting process that, by compromising but not abandoning the contending notions of fairness, commands general support.

Our explanation, therefore, for the disappointing record of voluntary siting approaches is that they are not considered legitimate and fair by many of the key actors. While bargaining a mutually beneficial deal is attractive to some, this individualistic notion of fair process and outcome is rejected by those who prefer more authoritative

<sup>3</sup> Ortwin Renn, Thomas Webler & Hans Kastenzholz, *Procedural & Substantive Fairness in Landfill Siting: A Swiss Case Study* 7 Risk 145 (1996).

and expert-dominated siting procedures as well as by those who view bargaining processes as a means of exploiting the poor and disadvantaged. Moreover, market mechanisms may crowd out other motivations for community members to accept a facility, especially the sense of responsibility or social duty they may feel towards dealing with hazardous waste.<sup>4</sup> Views on fairness are thus closely related to ideas of community, social consent and social organization.<sup>5</sup>

In this paper, we demonstrate the plural notions of fair process and outcome for siting hazardous waste facilities by examining experience in Austria, which has a traditionally hierarchical political culture, and comparing Austrian experience with the more individualistic political culture in the U.S. We also report on an Austrian questionnaire that shows that even within a dominantly hierarchical society, other views of fairness co-exist and compete. Finally, we suggest some possible elements of a robust siting policy that, by appealing to different ideas of fairness, can be accepted as “fair enough” by most or all of the antagonistic actors in a siting controversy.

### Competing Views of Fairness for Sharing the Siting Burden

Views on fairness cannot be separated from ideas about community and social organization, or the need to establish shared values for the conduct of community procedures and the distribution of rights, goods and burdens.<sup>6</sup> Two well-documented forms of social organization that coexist, as well as compete, are hierarchy and market<sup>7</sup>. Hierarchy is characterized by positional authority, inequality, and procedural

<sup>4</sup> Rolf Lidskog & Ingemar Elander, *Reinterpreting Locational Conflicts: NIMBY and Nuclear Waste Management in Sweden*, 20 *Policy & Politics* 249 (1992); Ray Kemp, *Why not in My Backyard? A Radical Interpretation of Public Opposition to the Deep Disposal of Radioactive Waste in the United Kingdom*, 22 *Env. & Planning* 1239 (1990); Bruno S. Frey, Felix Oberholzer-Gee & Reiner Eichenberge, *The Old Lady Visits Your Backyard: A Tale of Morals and Markets*, Presented at the 1995 University of Chicago, Application of Economics Workshop; and Doug Easterling, *Fair Rules for Siting a High Level Nuclear Waste Repository*, 11 *J. Policy Anal. Management* 442 (1992).

<sup>5</sup> Steve Rayner, *A Conceptual Map of Human Values for Climate Change Decision Making*, Presented at 1994 Workshop on Equity and Social Considerations, IPCC Working Group III, Nairobi, Kenya.

<sup>6</sup> *Id.*

<sup>7</sup> Charles E. Lindblom, *Politics and Markets* (1977); Oliver E. Williamson, *Markets and Hierarchies* (1975); and Michael Thompson, Richard Ellis & Aaron Wildavsky, *Cultural Theory* (1990).

rationality and, therefore, stands in sharp contrast to market forms of social organization with their emphasis on personal rights and freedoms. In hierarchies, people accept their rank and station (and inequality), as well as tightly administered rules and procedures, for the harmonious functioning and overall welfare of the society in which they live. Fairness and distributive issues are settled by administrative determination based on such considerations as the rank of the recipients, their needs or their contributions.<sup>8</sup> The individualistic form of social solidarity, by contrast, enshrines individual rights and initiative, negotiation and competition.<sup>9</sup> Once the initial endowments of individuals are set, distributive issues are settled by market interactions. Of course, no country's or state's siting procedures can be characterized as singularly hierarchical or individualistic. Most combine governmental and expert authority with participatory mechanisms that empower communities, formally or informally, to negotiate or bargain for a siting contract of some sort. However, viewing these procedures as embedded in and negotiated between hierarchical and individualistic political cultures is helpful in explaining the contradictory notions of fair process and outcome that are observed in siting controversies. We suggest that these two contradictory notions of fair outcome and process (hierarchical and individualistic), together with a third notion of fairness that we will come to presently, characterize and even help explain the siting impasse most countries face.

#### *A Hierarchical View of Fair Siting*

With authority located firmly with government officials and their expert networks, and with strict bureaucratic procedures in place, the Austrian siting process is predominantly hierarchical. Recently, two Austrian towns, Blumau and Enzersdorf, were identified by a secretive expert process as candidates for two hazardous waste facilities. In a departure from legal procedures, the citizens of these communities were involved in the approval process, but only on the condition that if the sites were found to be technically qualified, the citizens would raise no further objections. The authorities explicitly stated that the characteristics of the people and village — that Blumau is a poor,

<sup>8</sup> Rayner, *supra* note 5.

<sup>9</sup> Thompson et al., *supra* note 7.

farming community and that Enzersdorf is already burdened by other industrial risks — would not be factors in the site approval process.<sup>10</sup>

It must be pointed out that this technical, minimal-risk criterion need not be, indeed is often not, the sole criterion characterizing hierarchical siting processes, which often adopt benevolent, even patronizing, policies toward the public welfare.<sup>11</sup> Yet these policies must be justifiable and serve to maintain the control of the authorities. In this case, relenting to arguments of vulnerability on the part of the Blumauians and Enzersdorffians would have undermined the intent of the authorities to site facilities in these towns (since they had not admitted any alternatives). Choosing only technically qualified sites, with government authorities and their expert networks firmly in control, was a justifiable position for the Austrian authorities and consistent with the utilitarian tradition set out in the Austrian constitution.<sup>12</sup> Also in this tradition, the citizens of Blumau and Enzersdorf accepted the conditions for public involvement, and therefore showed a willingness to sacrifice their right of consent and to defer to public and expert authority.

Austria is not the only country with predominantly hierarchical procedures in place for siting socially necessary, but locally undesirable, facilities. Most European countries and U.S. states have traditionally relied on governmental authority to impose locally unwanted developments.<sup>13</sup> This orthodox approach has been successful in the case of Enzersdorf but has failed disastrously in the community of Blumau where it has been met by adamant social resistance. Similarly in the U.S., officials have unsuccessfully searched for a site for permanent storage of high level nuclear wastes for over twenty years. With growing protest over Yucca Mountain in Nevada, regulators are now considering more market-oriented approaches and encouraging communities to negotiate with the proposers for a facility site.<sup>14</sup>

<sup>10</sup> Joanne Linnerooth & Benjamin Davy, *Hazardous Waste Cleanup and Facility Siting in Central Europe: The Austrian Case*, Report to Bundesministerium für Wissenschaft und Forschung (1994).

<sup>11</sup> We owe this point to Thomas Schelling; personal communication, Aug. 1995.

<sup>12</sup> Linnerooth and Davy, *supra* note 10.

<sup>13</sup> Roger E. Kasperson, *Hazardous Waste Facility Siting: Community, Firm, and Governmental Perspectives*, in National Academy of Engineering, *Hazards: Technology and Fairness* (1986); and Kunreuther et al., *supra* note 1.

*An Individualistic View of Fair Siting*

Particularly in the U.S., the idea of governmental institutions and their expert networks determining sites to promote the social good tends to be viewed as an overly authoritarian approach based on a flawed calculation of the public's aversion to hosting these types of facilities.<sup>15</sup> At the least, the approach requires a strong public trust in government and expert judgment, which simply does not exist in the U.S. and is waning in most European countries.<sup>16</sup> Moreover, ample evidence indicates that expert measures of risk only loosely correlate with people's concerns about hazardous technologies.<sup>17</sup>

Some have sought to explain the dearth of hierarchical siting procedures in many U.S. states by invoking the NIMBY thesis.<sup>18</sup> Accordingly, top-down siting decisions are politically stalemated by social resistance because the concentrated costs felt by host communities create greater incentives to oppose a facility than the diffuse benefits give the larger population to support. The NIMBY thesis suggests that narrowly defined local and national interests, driven by perceptions of risks and benefits are the main explanatory factors of the siting impasse, an explanation which tacitly rules out any altruistic motivation on the part of individual citizens to sacrifice their personal benefits for greater societal interest and cannot cope with the now widespread phenomenon of people opposing facilities that are far from their backyards. Taking the individualistic view, the solution lies in

<sup>14</sup> Doug Easterling & Howard Kunreuther, *The Dilemma of Siting a High-Level Nuclear Waste Repository* (1994).

<sup>15</sup> Kasperson, *supra* note 13; Robert Cameron Mitchell & Richard T. Carson, *Property Rights, Protest, and the Siting of Hazardous Waste Facilities*, 76 AEA Papers & Proc. 285 (1986); and Howard Kunreuther, Paul Slovic & Donald MacGregor, *Risk Perception and Trust: Challenges for Facility Siting* 7 Risk 109 (1996).

<sup>16</sup> Roger E. Kasperson, Dominic Golding & Seth Tuler, *Siting Hazardous Facilities and Communicating Risks under Conditions of High Social Distrust*, submitted to J. Soc. Issues (1992).

<sup>17</sup> Paul Slovic, *Perceived Risk*, 236 Science 290 (1987); and Aaron Wildavsky & Karl Dake, *Theories of Risk Perception: Who Fears What and Why?* 119 Daedulus 41 (1991).

<sup>18</sup> Michael O'Hare, *Not on My Block You Don't: Facility Siting and the Strategic Importance of Compensation*, 25 Public Policy 409 (1977); and Kent E Portney, *The Potential of the Theory of Compensation for Mitigating Public Opposition to Hazardous Waste Treatment Facility Siting: Some Evidence from Five Massachusetts Communities*, 14 Policy Studies J. 81 (1985).

changing the balance between perceived local risks and benefits, not by administrative determination, but by granting citizens of prospective host communities the right to negotiate to their advantage. In other words, by actively influencing the design and control of the facility, as well as by negotiating lucrative benefit packages, supporters of this approach argue that residents, by collective consent mechanisms such as referenda, will voluntarily enter into siting contracts.<sup>19</sup>

In contrast to hierarchical siting approaches that are characterized by positional authority and appeals to utilitarian ideals, this individualistic form of social solidarity can be characterized by competition, bargaining and initiative based upon individual rights and community consent.<sup>20</sup> Advocates of the voluntary, market approach point to its guarantee of a Pareto improvement, i.e., one in which the siting decision (with compensation) is preferred over the status quo by all concerned.<sup>21</sup> To ensure that communities arrive at a compensation package that reflects the "reservation price" of the collective preferences of the residents (however defined), analysts have proposed bidding and auction mechanisms that assure a fair compensation price.<sup>22</sup> Because vocal opposition groups, which may represent only a small fraction of the community, often derail the process, advocates of this approach suggest that the negotiations be combined with direct citizen approval, preferably through a referendum.<sup>23</sup>

Voluntary, market forms of siting appeal to individualistic ideals of citizen rights and freedoms to negotiate mutually beneficial deals. If all

<sup>19</sup> Bradley Whitehead, *Who Gave You the Right? Property Rights and the Potential for Locally Binding Referenda in the Siting of Hazardous Waste Facilities* unpublished (1991); Howard Kunreuther, Kevin Fitzgerald & Thomas D. Aarts, *Siting Noxious Facilities: A Test of the Facility Siting Credo*, 13 *Risk Anal.* 301(1993); and Michael B. Gerrard, *Whose Backyard, Whose Risk: Fear and Fairness in Toxic and Nuclear Waste Siting* (1994).

<sup>20</sup> Thompson et al., *supra* note 7.

<sup>21</sup> Michael O'Hare, Lawrence Bacow & Debra Sanderson, *Facility Siting and Public Opposition* (1983); Howard Kunreuther et al., *A Compensation Mechanism for Siting Noxious Facilities: Theory and Experimental Design*, 14 *J. Env'l Econ. & Management* 371 (1987); and David Laws & Lawrence Susskind, *Changing Perspectives on the Facility Siting Process*, Draft Paper (1991).

<sup>22</sup> Howard Kunreuther & Paul Portney, *Wheel of Fortune: A Lottery/Auction Mechanism for Siting of Noxious Facilities*, 117 *J. Energy Engineer.* 125 (1991).

<sup>23</sup> Bruno S. Frey & Felix Oberholzer-Gee, *Voluntary Siting of Noxious Facilities: Comment*, Presented at the 1993 IIASA Risk and Fairness Workshop; Whitehead, *supra* note 19; and Gerrard *supra* note 19.



the residents feel better off as a result of the transactions, the outcome is Pareto superior to not siting the facility. Since it is inconceivable to proponents of this approach that a Pareto improvement — where all concerned feel themselves to be better off — is not viewed as a fair outcome, it is worth noting that the concept of Pareto welfare has come under increasing critical scrutiny.<sup>24</sup> Although a discussion of this critique is beyond the scope of this paper, it is important to recognize the underlying individualistic ethic of welfare theory. Individual choice, whether or not it satisfies any particular social goal not held by the individuals making the choices, determines the social good.

The market approach to siting noxious facilities has had little success. Beginning with the 1980 Massachusetts Hazardous Waste Facility Siting Act, many U.S. states have legislated various forms of voluntary consent with negotiated compensation for siting hazardous waste and other locally undesirable facilities, most recently for siting a low level radioactive waste repository in Maine.<sup>25</sup> With few exceptions, these approaches have failed to reach agreement on compensating the host community.<sup>26</sup> Proponents offer a number of explanations, including flawed communication, badly designed mechanisms of consent and the failure to consider neighboring communities.<sup>27</sup> They point to experience with many non-hazardous, solid waste facilities where host fees have been instrumental in siting.<sup>28</sup>

Despite discouraging practical experience, a negotiated outcome where all parties view themselves as better off than the status quo, and a market bargaining procedure that upholds individual rights, is the

<sup>24</sup> Amartya Sen, *Rational Fools: A Critique of the Behavioral Foundations of Economic Theory*, Philosophy & Pub. Affairs Summer 1977, at 4; and Young, *supra* note 2.

<sup>25</sup> Laws & Susskind, *supra* note 21.

<sup>26</sup> Kunreuther and Portney, *supra* note 22; Easterling, *supra* note 4; J. T. Hamilton, *Politics and Social Costs: Estimating the Impact of Collective Action on Hazardous Waste Facilities*, 24 RAND J. Econ. 101 (1993); James J. Opaluch et al., *Evaluating Impacts from Noxious Facilities: Including Public Preferences in Current Siting Mechanisms*, 24 J. Env'l Econ. & Management 41 (1993); and Anna Vari, *Public Perceptions about Equity and Fairness: Siting Low-Level Radioactive Waste Disposal Facilities in the United States and Hungary*, Presented at the 1993 IIASA Risk and Fairness Workshop.

<sup>27</sup> Gerrard, *supra* note 19.

<sup>28</sup> *Economics of Trash: Some Towns Get Little for Agreeing to Dumps*, Wall Street Journal, Dec. 3, 1991, at 1.

individualistic view of a fair outcome and process for siting hazardous facilities. As the economist Coase theorized, market bargaining will lead to a Pareto improved position no matter how the initial property rights are distributed.<sup>29</sup> In the words of Whitehead, "It would appear that a combination of local decision making authority and negotiated compensation would produce the 'Coasean ideal' and siting would no longer be an issue."<sup>30</sup>

### *An Egalitarian View of Fair Siting*

Yet, siting remains an issue, and, we contend, for more fundamental reasons than flawed design of the consent procedures. A recent example concerning the Paiute-Shoshone Native American Tribe in Oregon illustrates the moral indignation that the market approach often invokes. The Paiute-Shoshone's agreement to negotiate terms, presumably compensation in terms of money and jobs, for storing spent nuclear fuel on their reservation was met with the following:<sup>31</sup>

Any decision to store high-level nuclear waste anywhere, even temporarily, ought to be based on sound science, not bribery or cynical manipulation of the jobless poor. Social welfare it is not.... Just because there are two willing partners to do this tango is no reason to hold the dance.

Since the poor are willing to accept less compensation, critics claim that the burden inevitably and unjustly lands on minority and vulnerable communities.<sup>32</sup> For this reason, advocates of environmental justice uncompromisingly reject the market approach to siting locally unwanted facilities as unfair, even morally wrong.

Possibly no other issue better illustrates our theme of competing forms of social organization and the resultant incompatible views of fairness. Market advocates argue that if the site is proved to be technically qualified (though not technically best) and if the Paiute-Shoshones have full authority to make the final decision, then a compensated deal can be viewed as fair and legitimate.<sup>33</sup> The

<sup>29</sup> Ronald A. Coase, *The Problem of Social Cost*, 3 J. L. & Econ. 1 (1960).

<sup>30</sup> Whitehead, *supra* note 19, at 14.

<sup>31</sup> *Reject Nuclear Bribery*, The Sunday Oregonian, Mar. 6, 1994, at 11.

<sup>32</sup> Robert D. Bullard, *Waste and Racism: A Stacked Deck?* Forum Appl. Research & Pub. Policy, Spring 1993, at 29.

<sup>33</sup> Lawrence S. Bacow, *Waste and Fairness: No Easy Answers*, Forum Appl. Research & Pub. Policy, Spring 1993, at 43.

alternative, forcing the wastes on an affluent community, is paternalistic and “Pareto pessimal” in that both communities would then feel themselves worse off than had the Paiute-Shoshones taken the waste, jobs, and money. Neither the market nor hierarchical approaches are universally rejected; indeed, each has (albeit in different proportions and patterns of interaction in different countries) strong supporters. According to cultural theorists, their critics would likely be those — the egalitarians — whose solidarity exists within a third mode of social organization.<sup>34</sup> Egalitarians, as their name suggests, reject both the unequal social relations of hierarchy and the competitive outcomes of markets. Their rationality is more critical, and generally they reject siting efforts for hazardous waste facilities on the strongly held moral basis that the wastes necessitating the facilities should not be produced in the first place.<sup>35</sup> Egalitarian solidarity is strengthened by appeals to a shared morality, and it is their moral imperative to reject siting procedures that perpetuate social inequality.

The voluntary trade of health and safety risks from an unequal starting position or reference point, even if it improves the health and safety of those making the bargain (as market advocates argue), is therefore illegitimate to the egalitarian. Not only is the assumption that the poor and uneducated can negotiate an improvement in their situation suspect, but a greater improvement in social welfare is possible by placing facilities in affluent communities since this compensates for past injustices and will do more towards eliminating the unjust economic activities that have created the need for the facilities in the first place. As such, the siting of hazardous waste facilities in poor areas, even with compensation, is viewed as an exploitation of those in poverty and not as a means of improving their economic condition. Moreover, the marketing of health and safety transgresses the legitimate realm of markets, and can be compared with the social aversion to the marketing and sale of, for example, kidneys, or even children.<sup>36</sup>

The important distinguishing feature of the egalitarian is that a situation with an increased overall burden may be accepted if the burden is distributed more equally among the population. A form of

<sup>34</sup> Thompson et al., *supra* note 7.

<sup>35</sup> Michael Thompson, *Unsiteability: What Should It Tell Us?* 7 Risk 169.

<sup>36</sup> John Rawls, *A Theory of Justice* (1971); and Elster, *supra* note 2, at 224.

egalitarianism is the victim-based view, which supports the notion that the worst-off people or worst-off communities have a legitimate moral complaint to make about their situation, and that their situation deserves special attention.<sup>37</sup> Accordingly, Enzersdorf has a special claim for exemption because its citizens are already heavily burdened; Blumau also has a special claim based on citizen poverty. Hierarchical forces in Austria, however, rejected these egalitarian concerns that the characteristics of the host community, including income, education and health status be regarded as moral factors in site selection.<sup>38</sup>

### Austrian Views on Fair Siting Procedures and Outcomes

Thus far, we have characterized Austrian siting processes as predominantly hierarchical, whereas we have noted that individualism plays a more prominent role in many U.S. siting procedures (and that both approaches are rejected by egalitarians as unfair). While these characterizations hold, cultural theorists suggest that the variations in political attitudes and values within countries are at least as great as those between countries.<sup>39</sup> If this is the case, then we can expect large variations in views about fair siting procedures and outcomes within both Austria and the U.S.

To examine the cultural plurality of public views on siting hazardous waste facilities, we administered a questionnaire to 111 residents of Lower Austria. The intent of the questionnaire was to elicit Austrian views on the three culturally differentiated siting approaches: hierarchical siting procedures, where expert studies constitute the main criteria for site selection and approval (the current Austrian approach); voluntary processes with negotiated compensation; and, egalitarian approaches placing emphasis on distributive equality. A written questionnaire was given to fourteen residents of Blumau, 24 residents of Enzersdorf, ten industry experts, and 63 citizens of Lower Austria. The sample was representative of Lower Austria with respect to educational background (5.7% with advanced degrees compared to 5% in Austria) and sex (52% female compared with 51% in Austria) of respondents.

<sup>37</sup> Douglas MacLean, *Variations on Fairness*, Presented at the 1993 IIASA Risk and Fairness Workshop.

<sup>38</sup> Linnerooth & Davy, *supra* note 10.

<sup>39</sup> Thompson et al., *supra* note 7.

The questionnaire focused on both outcome and procedural fairness. Is it fair, for instance, to put a hazardous waste facility in an industrial area, such as Enzersdorf, where residents are already heavily burdened by industrial risks? Is it fair to choose a site in an economically disadvantaged and environmentally pristine area, such as Blumau, where citizens have benefitted little from industrialization of the economy? If one site is technically superior, i.e., it minimizes population and environmental risks, should other characteristics of the community matter at all? Should the potential host community have the right of refusal, and how should this be determined? Are lottery and bidding mechanisms appropriate for allocating facilities among technically qualified sites? Do regions and even countries have a responsibility to deal with their own wastes, and not to export them? These questions, which relate closely to the three cultural categories identified as important in views on fair siting procedures and outcomes, were explored in the Austrian questionnaire. The results are shown in Table 1.

Table 1  
Austrian Views on Fair Siting Processes and Outcomes

<i>[Values in %]</i>	<i>Blumau</i>	<i>Enzersdorf Experts</i>	<i>Industry</i>	<i>Citizens</i>	<i>Overall</i>
Absolute Priority to Lowest Risk Site (Let Experts Decide)	64	42	70	46	53
Voluntary Siting Use Market Mechanisms (Bidding, compensation)	79	67	20	54	55
Seek Equality	14	20	25	40	29
• Equal Chance Lottery	7	33	40	49	38
• Prefer Many Small Facilities	21	50	11	27	30
Assign Responsibility					
• Industry Should Deal with Own Wastes	93	83	88	84	85
• Do Not Ship Out of Country	79	80	100	89	85

Perhaps the most striking result of the questionnaire was public support for its hierarchical siting procedures. When the respondents were asked if they would disregard all features of the host communities (whether they are already burdened by other industrial hazards,

whether they are poor and vulnerable, whether they have benefitted from industrial production etc.) if experts reported that the proposed site was technically superior or posed the lowest overall risk to the public, 53% of the respondents answered positively (and 70% of the industrial experts). This shows a remarkable deference to expert authority and an acceptance of Austrian hierarchical political procedures, at least by many of the respondents. It also shows a concern with assuring that the site is technically suitable, above and beyond other social considerations.

Around half of those questioned (and 79% of the Blumauians) felt that the prospective host community should, however, have the right to refuse a site even if the site is technically qualified. This is not necessarily inconsistent with the reported emphasis on giving priority to the lowest risk site (and as seen on Table 1, some people responded positively to both). Among those who advocated voluntary siting procedures, there was almost unanimous agreement that this consent should not be the prerogative of the major, but rather a citizens' committee or referendum. This enthusiasm with voluntary siting procedures did not, however, go hand in hand with an enthusiasm for community bargaining or bidding for compensatory benefits, which was rejected by nearly two-thirds of the respondents.

Support for voluntary siting procedures, but rejection of market mechanisms, shows the fallacy of assuming that the two are complementary components of what we call here the market approach. Indeed, different forms of voluntary siting procedures can complement hierarchical approaches by formalizing the often informal practice of negotiating with the community, yet with the understanding that the state has ultimate authority if an agreement is not reached.

Given Austria's entrenched hierarchical procedures, it is still remarkable that 29% of the respondents, and 40% of the citizens not living in Blumau or Enzersdorf, were in favor of market transactions with respect to siting hazardous waste facilities. This suggests a substantial, individualistic component of Austrian political life. Egalitarian tendencies were also present. Around a third of the respondents were in favor of choosing among qualified sites with an equal-chance lottery, and again around a third would prefer building

and distributing several smaller facilities than one large one, even if the risks of this option were slightly higher (the Blumauians, however, were far less egalitarian).

Perhaps the most significant finding of the questionnaire was the importance placed on the concept of responsibility. The notion that people producing wastes, whether an industry or a country, should be primarily responsible for dealing with them, was a value held by 85% of the respondents. This was demonstrated in the respondents' views that the industry should deal with its own wastes as well as views that wastes should not be exported. Taking local responsibility for wastes, therefore, appears to be one important element of a robust siting strategy that transcends the culturally differentiated views of fair process and outcome.

The overall finding of this questionnaire is that the residents of Lower Austria are far from homogeneous in their views towards siting hazardous facilities. Many appear to support their traditional siting structures with legitimacy rooted in technical expertise; others hold strong egalitarian views for spreading the burdens as evenly as possible; many are concerned about criteria that justify unequal distributions, especially contribution to the waste problem and ecological vulnerability; and still others are individualistic in their support of market mechanisms for allocating the burden. Given this plurality of values regarding fair siting procedures and outcomes, it is striking that nearly everybody values the notion of responsibility. Taking direct responsibility for waste disposal, whether by the individual, the firm or the country producing the wastes, appears to be generally appealing, although arguably for different reasons. The individualist, in theory, would support the notion of individual responsibility and liability, as would the egalitarians in their insistence on allocating the burdens to producers. Hierarchists would also find the notion appealing to the extent that this responsibility is managed by the established institutions.

The importance of the notion of responsibility for a region or country to deal with its own wastes is supported by the results of a survey carried out in Switzerland, which showed that outright compensation is unacceptable to a large number of people because it distracts from the motivation of accepting the facility as a social duty

or responsibility.<sup>40</sup> The significance of responsibility as a motivating factor is also apparent in another context — the strong opposition to exporting hazardous wastes to facilities in poor countries, where many feel that countries have the responsibility to deal with their own wastes in spite of economic arguments that this practice can benefit the importing country.

### Concluding Remarks

People appear to hold conflicting views about fair process and outcome with respect to allocating the burdens of hazardous facility sites. Voluntary siting approaches that give the right of consent to the prospective host communities, enabling them to bargain a compensatory package, appear to many as a way out of what they view as a NIMBY problem and thus as a fair solution to the siting impasse. However, the NIMBY syndrome, based on an individualistic notion of balancing risks and benefits, is an incomplete characterization of the full range of personal motivations and commitments to a siting process and outcome. Other motivating factors are rooted in hierarchical ideals of sacrificing community rights for the overall harmony of society, as well as egalitarian ideals of exempting the poor and disadvantaged from the siting burden.

If a workable and generally accepted siting strategy for hazardous facilities is indeed possible, it will need to grant legitimacy to the different ideas of what is fair. Such a strategy must be tailored to the prevailing political culture, or the relative strengths and patterns of competing ideals, of the country involved. The hierarchical, expert dominated process that eventually led to the acceptance of a hazardous waste facility at Enzersdorf in Austria (but not Blumau), will certainly not be appropriate in the U.S. with its anti-hierarchical traditions. However, any approach based on only one concept of fairness will likely encounter strong opposition in any country.

Reconciling contradictory values about fairness in sharing social burdens is by no means impossible as experience in allocating other types of social burdens shows. What is crucially important in siting hazardous facilities is the identification of values that are held by most

<sup>40</sup> Frey et al., *supra* note 4.



or all of the contending parties to the debate, and in this way to construct robust siting strategies. The Austrian questionnaire suggests that the concept of responsibility may be one such motivating value held by all the contenders in a siting debate. We have argued that only by granting legitimacy to these different notions of fairness, and by building on common values such as responsibility, will it be possible to design siting procedures that promote social cohesion, trust and a sense of fair play.

