

Is Anyone to Blame for Pollution?

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By making use of a distinction between “making something happen” and “allowing it to happen,” a polluting act can be defined as making something happen with widely scattered externalized costs. Not all polluting acts are blameworthy, but we can investigate which polluting acts are sufficiently badly performed as to be blameworthy. This definition of polluting act permits us to justify the belief we often have that behavior concerning pollution may be blameworthy, even when we do not know whether the behavior caused harm.

I. INTRODUCTION

We often have reason to believe that a particular course of action causes harm or poses a risk of harm to the environment or to human health, even though we lack information about the causal mechanism involved. In this paper I argue that the concept of negligence can reasonably be extended to cases of this kind. The concept of negligence is itself imperfectly clear, but it can reasonably be applied where causal knowledge of events is lacking, and it clarifies ethical understanding in such cases. In particular, it is reasonable to assign blame for polluting acts done negligently.

When ethical and political judgments about such matters depend on causal knowledge, we cannot reach judgment. For example, in the early twentieth century, the Hooker Chemical Company (now Occidental) put a huge amount of poisonous chemicals in a ditch, Love’s Canal, in Niagara Falls, New York, and then sold the site to the city. By 1977, residents of the Love Canal neighborhood were living nearly on top of the buried poisonous chemicals. But since then, studies of whether these known poisons have caused any illness in the residents fail to show a causal connection. Three studies confirm an increased rate of low birth weight along the routes of underground water flow, but the studies disagree over when the lowered birth weights occurred, and the mechanisms of exposure remain unclear. Consequently, there has been no legal judgment of harm done to the residents.¹

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¹ National Research Council, Committee on Environmental Epidemiology, *Environmental Epidemiology*, vol. 1: *Public Health and Hazardous Wastes* (Washington: National Academy Press, 1991) surveys the results of health studies of residents of Love Canal, as well as the epidemiological studies of the effects of other toxic waste dumps. After repeated delays, in

It is not known whether the poisonous chemicals in Love Canal caused harm. There are several reasons for this lack of knowledge, but the most important reason is quite general. Because there are only a few people directly exposed to the poisons, it is difficult to distinguish a small effect from random variation. Other reasons for the lack of knowledge include the fact that there are too many chemicals to test, and it is always difficult to control for extraneous factors. Like any environmentalist, I am inclined to guess that Love Canal residents were harmed, but we do not know.

II. NEGLIGENCE AND BLAME

This lack of knowledge does not entirely obscure our ethical judgment, however. We may first observe that it is common that performing an act can obligate us to perform it in a certain way. Driving a car obligates me to keep my eyes on the road, and to signal before turning, etc. It is reckless to drive a car without doing so in these ways. But there are also cases in which performing an act obligates me to do it in a certain way, and yet I might not know whether I am doing it in the right way. The obligation exists even if I do not know it. In such cases, we say that I ought to have known, and I am judged to be negligent. Negligence and recklessness are ways of being blameworthy.

Suppose, for example, that I ignorantly use garden hose to install gas pipes in a house. Suppose that there are many advantages of using garden hose for gas pipes. It is less expensive than copper pipe. Suppose that since garden hose is not often used for this purpose, and has not been tested for this use, the consequences and risks are unknown. Suppose, further, that I use the most durable garden hose available and fasten it securely. Finally, suppose that this poor choice of materials causes no harm to the residents of the house.

Nevertheless, by using garden hose as gas pipe, I am negligent. I am obligated to use the right materials for the job, even if I do not know what these are, and even if the results of my choices are not foreseeable. We know that gas is dangerous and requires proper care, even if we do not foresee exactly how it may cause harm. In this case, we have supposed that we do not know how long the garden hose will last, or whether it will cause harm to anyone. If using garden hose does cause harm, even if just by leaking and running up the gas bill, then the negligence would be even clearer. But even if there is no harm nor foresight of harm, the lack of harmful consequences does not prevent us from concluding that it is negligent to use garden hose as gas pipe.

October 2004 the New York State Department of Health is due to release a long-term health study of Love Canal residents. Sylvia Noble Tesh, *Uncertain Hazards: Environmental Activists and Scientific Proof* (Ithaca: Cornell University Press, 2000), takes a skeptical but pro-environmentalist stance on the health effects of toxic waste dumps, including Love Canal. Also see Aaron Wildavsky, *But Is It True? A Citizen's Guide to Environmental Health and Safety Issues* (Cambridge: Harvard University Press, 1995), for a skeptical anti-environmentalist view of toxic pollution, including a chapter on Love Canal.

But perhaps, it may be objected, we do not actually know I am negligent unless tests show that garden hose is not a good material for gas pipes. Otherwise, this objection continues, I am being held responsible for harm that has not occurred, or is even foreseeable. I believe it is clear that we do know it is negligent to use garden hose as gas pipe. To explain why, I need to say something about the concept of negligence.

Negligence is a way of being at fault. In tort law, responsibility for harm usually consists of a combination of causation of harm and fault for harm. Harmful consequences themselves are rarely sufficient to show responsibility, except where strict liability applies. (In cases of product liability and of inherently hazardous activities, I would argue, we simply assume the agent is at fault, and it is not necessary to show that the agent is at fault.) Of course, if there is actual harm, this harm is strong evidence for negligence.

Since negligence is a way of being at fault, and it does not depend on actual harm, it may seem to depend on the state of mind of the agent. It may seem to be subjective. But if negligence were subjective, then an agent might avoid responsibility simply by shielding himself or herself from detailed knowledge of his or her actions and their consequences. It is unfortunately common for powerful people to protect themselves in this way, but not a good excuse. Indeed, negligence is intended to cover precisely the cases in which the agent does not know the right way to perform an act, let alone the consequences of acting in the wrong way.

Negligence is a failure to exercise a capacity when it is appropriate to do so. Because this failure depends on the capacities of the agent, it may vary. Further, it depends on the nature of the act being performed and the situation.² Negligence arises when a person performs an act (or has a status) that in so doing (or that having such status) imposes an obligation to perform it (or uphold it) in a certain way. Rather than a state of mind of the agent, such as foresight, negligence describes the many ways an act can be performed wrongly: sufficiently wrongly to be blameworthy. Negligence may include a failure to learn or know something, but there need to be objective criteria: standards of what a reasonable person is expected to know or might be expected to learn. For many actions, there is an obligation to find things out. A driver is obliged to look both ways at an intersection, even if no one actually does this, regardless of the state of mind of the driver, and even if no one happens to be harmed by failure to do so.

Negligence describes how an act is performed. In this sense of negligence, it is negligent for me to use garden hose as gas pipe, even without any actual

² H. L. A. Hart, "Negligence, Mens Rea, and Criminal Responsibility," in *Punishment and Responsibility* (New York: Oxford University Press, 1968), p. 152: "What is crucial is that those whom we punish should have had, when they acted, the normal capacities, physical and mental, for doing what the law requires and abstaining from what it forbids, and a fair opportunity to exercise these capacities." Hart argues on this basis that it is misleading to say either that responsibility for negligence is subjective or that it is objective. But here, contrary to Hart's legal positivism, I am using negligence as an ethical concept.

harm resulting, or anyone having foresight of harm.³ State of mind may be relevant, although it is not necessary. If foresight is at all relevant to my negligence, it is in my failure to find out whether garden hose is adequate as gas pipe. This failure is better seen as a part of my negligence than as an excuse. But it is sufficient for my purposes to show that my negligence in using garden hose for gas pipe does not depend on actual harm or foresight of harm, and instead depends on how I act.

It is probably clear that the Love Canal situation is similar to the garden hose case in several respects. In both cases, a hazardous material is poorly contained. In both cases, there is lack of foresight by the agent who arranged the hazardous material. In both cases, there is no evident harm caused by the poor handling of the hazardous material. In both cases, there is a capacity to avoid doing what the agent is doing, but this capacity is not exercised.

III. IMPOSING RISK

I want to extend the account of the negligence in the hypothetical garden hose case to real cases of toxic pollution. To do so I need to reckon with many difficulties that do not arise in the simple case of using garden hose for gas pipe. These difficulties can be arranged under two headings. Some of these arise because of the nature of pollution. Because the harmfulness of pollution is probabilistic, it is difficult to set standards by which a material can be so badly handled as to be negligent. Other difficulties concern the nature of polluting acts. Because of the diffuse nature of pollution, responsibility for it is often unclear. I suggest that this is the main problem confronting the attempt to assign blame for toxic pollution.

Pollution does not generally have harmful consequences as direct or immediate as, say, that of a gunshot at close range. The harmful effects of pollution are probabilistic. There are non-probabilistic consequences, however these are not what raise the ethical issues. When foreign substances work their way into the body of a Love Canal resident, we might view this as trespass. But it would be excessive to find blame in this if the foreign substance is inert, like gold, unless it is in a massive quantity, in which case we are really talking about something like a gunshot wound. Pollution raises ethical issues of probable harm. The poisonous chemicals in the body of a Love Canal resident have a probability of reacting with chemicals in her body, and if so, there is some

³ Environmental problems stretch the idea of foreseeability beyond its usefulness as a requirement for responsibility for harm. Joe Thorton notes in *Pandora's Poison: Chlorine, Health, and a New Environmental Strategy* (Cambridge: MIT Press, 2000), p. 83, that there are about 11,000 organochlorides on the U.S. market today. Many or perhaps all of these are poisonous to some extent. To test the health effects of all combinations of these chemicals would require more experiments than there are atoms in the universe. Foreseeability of harm is impossible. It is unclear what measure of foresight we ought to require here.

probability of biological effects, which may lead to disease. The indirectness of this chain of events can make it seem that we cannot apply the concepts of negligence or blame to Hooker Chemical's actions at Love Canal.

The probabilistic nature of some events does not dissolve their blameworthiness, however. There are acts in which risks are wrongly imposed. Suppose I use a six-chamber revolver to play Russian roulette on someone else. Suppose that this person is lucky enough not to be shot by the bullet in one of the six chambers. Suppose that this person does not know I am playing this game, so he or she does not even suffer any distress. Nevertheless, I am clearly performing a reckless act of imposing risk on other people.⁴ Doing so is blameworthy, even if no one is actually hurt. Similarly, suppose I do not intend to play Russian roulette on anyone. But I inadvertently drop my revolver, loaded with one bullet, in an elementary school playground. Despite the probabilistic nature of the harm that may result, I am clearly negligent.

Perhaps it may seem that I am only probably to blame in these cases. It may seem, from this view, that while my actions are odd and disturbing, these are blameworthy only if someone is harmed, and thus only probably blameworthy unless that happens. But this view would dissolve our ethical concepts in probability. Even a fully loaded gun, fired directly at someone, might misfire, and yet we would not want to describe this act as having only a high probability of blame, unless it is probability equal to one.

On the other hand, there are many situations in which I may impose risk without incurring blame. When I put my car on the road, I impose a risk on other motorists, pedestrians, and bicyclists. If I serve you a cup of coffee, I may stumble and spill it on you. But there is negligence only if I offer it in the wrong way, perhaps by setting the cup on the edge of the table. It is also important to note that I may do something that is wrong in an objective sense, but yet not blameworthy. If someone else spikes the coffee with arsenic before I unknowingly serve it to you, then what I do is wrong in an objective sense, but not blameworthy. But the point is that the probabilistic nature of the harms that may result from pollution does not foreclose blame for the acts of imposing those risks.

IV. POLLUTING ACTS

The main difficulty in extending the concepts of blameworthiness and negligence to cases of pollution is that responsibility is often unclear. Even in the Love Canal case, Hooker Chemical (or Occidental) has some basis for saying that residents share some responsibility by choosing to live in the Love Canal neighborhood, and that the Niagara Falls School Board shares some

⁴ This example is from Judith Jarvis Thomson, "Imposing Risks," in her book *Rights, Restitution, and Risk* (Ithaca: Cornell University Press, 1986), pp. 173-91.

responsibility. The problem here, however, is not that there are no acts being performed. In order for pollution to get to Love Canal, there were many acts of planning, making, transporting, digging, etc. These acts might be understood as having been performed by the corporation itself as agent, or else by individual decision makers in control of the corporation. The problem is that so many acts we perform may seem to be polluting acts in some way, perhaps indirectly, that it is difficult to distinguish an ethically significant category of polluting acts.

For my purposes here, then, I assume there is some distinction between making something happen and allowing something to happen. When I drive my car to work, doing so makes something happen. But if I do not join efforts to stop a highway construction project, I merely allow it to happen. Jonathan Bennett thoroughly criticizes this distinction and concludes, I think correctly, that distinction is "tied to some received way of looking at behavior, rather than a product of high-level moral theory."⁵ Unlike Bennett, however, I see this shared understanding as a basis for ethical theory and I rely on it.

Based on a distinction between making and allowing, I can propose a definition of "polluting act." A polluting act is an act ("making something happen," however that may be understood) such that there are externalized costs that are widely scattered. Externalized costs are those not borne by the agent.⁶ Driving to work has various consequences, good and bad. Among the good consequences are that I get where I want to go. Among the bad consequences are that I scatter poisonous chemicals in the air that everyone breathes. We may want to go on to say that the costs of a polluting act are imparted by way of a biologically important part of the environment, such as air, soil, or water, but I do not need to make this restriction.

This definition of "polluting act" is not limited to acts that impart costs by way of air, soil, and water. I can give another example. People who drive much larger cars than others impose a safety risk on those who drive smaller cars. This cost is externalized in a widely scattered way, so it is a polluting act by my definition. Whether or not this is a negligent risk imposition depends on our assessment of standards that would not be worth noting if everyone drove cars that were more or less the same size.

This proposed definition includes many acts, and we do not want to say that every polluting act is wrong. All I want to claim is that polluting acts are blameworthy if they are intentionally or recklessly destructive or negligent. As noted above, we can sometimes do wrong without being blameworthy, but unless our ethical concepts are entirely inadequate, such cases should be unusual.

⁵ Jonathan Bennett, *The Act Itself* (New York: Oxford University Press, 1995), p. 192.

⁶ See Judith Jarvis Thomson, review of Jonathan Bennett, *The Act Itself*, *Nous* 30, no. 4 (1996): 545–57, for an account of the ethical significance of the distinction between making and allowing.

More importantly, negligence depends on standards of behavior that are constantly being adjusted. Changes in technology mean that we set or recognize new standards. We do not say that it is negligent to drive to work, despite this being a polluting act. But if I drive a vehicle that is badly out of tune, I violate a standard of how badly I may permissibly perform the act of driving. Here, I appeal to the reader for agreement, even if this standard is not stated anywhere.

This definition of a polluting act is based on the assumption that there is an ethically significant distinction between making something happen and allowing it. If this assumption is not correct, there may be other ethical grounds for regulating some but not all of the same behavior. For example, it is not blameworthy for me to give someone a cold by sneezing and coughing, even though this may result from voluntary behavior bringing me into contact with others. Giving someone a cold is to allow something to happen, rather than to make it happen. Yet, if a contagious disease is sufficiently harmful or presents a sufficiently great foreseeable harm, a quarantine is justified, but not otherwise.

Pollution regulations may also be justified on biological grounds without blaming polluting acts. But pollution regulations are not justified on these biological grounds unless pollution is shown to be harmful or to present a foreseeable harm. Otherwise, pollution is nothing but exhaling and excreting on an industrial scale. The view advanced in this paper, however, would justify regulation if polluting acts are done in the wrong way, even if the acts not yet shown to be harmful or foreseeably harmful.⁷

Now we can return to Love Canal. The acts of Hooker Chemical, or those of the people whose decisions controlled it, imposed risks on the residents of the neighborhood, even if it is not known whether they were harmed. These risks are externalized costs, so the acts imposing these risks are polluting acts. But whether these are negligent acts depends on how these were done. In this case, the standards for disposing of chemical waste were unclear at the time. The acts of imposing these risks were performed inattentively, and without understanding of what was being done. But it was negligent to sell land that carries these risks.⁸

⁷ I believe that the view that there are blameworthy polluting acts supports shifting the burden of proof onto polluters, and a human rights approach to the environment. See Robert D. Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality*, 3d ed. (Boulder: Westview Press, 2000), pp. 121–25; Sandra Steingraber, *Living Downstream: A Scientist's Personal Investigation of Cancer and the Environment* (New York: Vintage, 1998), pp. 268–71, p. 284; Carolyn Raffensperger and Joel Tickner, editors, *Protecting Public Health and the Environment: Implementing the Precautionary Principle* (Washington: Island Press, 1999); Kristin Shrader-Frechette, *Environmental Justice: Creating Equality, Reclaiming Democracy* (New York: Oxford University Press, 2002).

⁸ In *U.S. v. Hooker Chemicals and Plastics Corp.*, 850 Federal Supplement, 993 (W.D.N.Y., 1994), Judge John Curtin ruled that Hooker (Occidental) Chemical was negligent but not reckless in its transfer of Love Canal land to the Niagara Falls School Board in 1953.

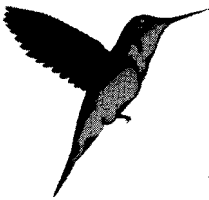
V. CONCLUSION

I have argued that we can justify an inclination to assign blame for pollution, despite the lack of knowledge of harm that persists even for the case of Love Canal. It might be objected that common-sense ideas about blame are not suited for pollution because the harmfulness of pollution is merely probable. But negligent, reckless, or intentional acts of risk imposition are blameworthy in ways that are not much different from more directly harmful acts.

It might also be objected that the diffuse responsibility for environmental pollution means that the common-sense idea of blame is not helpful in ethical understanding of pollution. I suggest, however, that we can make use of a distinction between making something happen and allowing it to happen. Then a polluting act can be defined as making something happen with widely scattered externalized costs. Not all polluting acts are blameworthy, but we can investigate which polluting acts are sufficiently badly performed as to be blameworthy. By making use of this definition of polluting act, we can justify the belief we often have that behavior concerning pollution may be blameworthy, even when we do not know whether this behavior caused harm.

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