Last month, a woman in the U.S. state of Georgia named DeShan Fishel was driving near a school and saw a Jeep rush past a stop signal on a school bus, clipping a 5-year-old boy. The other driver sped away.

Fishel whipped a U-turn and gave chase. She stayed with the Jeep on surface streets and caught the driver, making him pull over. She watched the driver until police officers arrived.

"All I could think about was that little kid, getting hit, and this person getting away with it," Fishel said at a news conference. "It just really upset me."

The public urge for punishment that helped delay the passage of Washington's economic rescue plan is more than a simple case of Wall Street loathing, according to scientists who study the psychology of forgiveness and retaliation. The fury is based in instincts that have had a protective and often stabilizing effect on communities throughout human history. Small, integrated groups in particular often contain members who will stand up and punish cheaters, liars and freeloaders - often at significant risk to themselves.

Scientists debate how common these citizen enforcers are and whether an urge to punish infractions amounts to an overall gain or loss, given that it is costly for both parties. But recent research suggests that the fairness instinct in individuals is a highly variable psychological impulse, rising and falling in response to what is happening in the world. And there is strong evidence that it hardens in times of crisis and uncertainty.

The catch in this highly sensitive system, most researchers agree, is that it most likely evolved to inoculate small groups against invasive rogues and not to set right the excesses of a vast, diverse community like the U.S. economy.

"The urge to take revenge or punish cheaters is not a disease or toxin or sign that something has gone wrong," said Michael McCullough, a professor of psychology at the
University of Miami and author of the book "Beyond Revenge: The Evolution of the Forgiveness Instinct." "From the point of view of evolution, it's not a problem, but a solution."

The downside of these instincts, McCullough added, "is that they often promote behavior that turns out to be spiteful in the long run."

Examples of justice are abundant in traditional, remote societies where state institutions are absent. In some Inuit villages, said Edie Turner, a professor of anthropology at the University of Virginia, tribe members will shout disapproval at someone who is stealing or cheating, sometimes casting a public curse on the person that can be removed only in a ceremony conducted by tribal elders.

Given the choice, most people prefer that others do the hard work of enforcement, recent research has found. Scientists often study cooperation and punishment through one-on-one investment games in which each player chooses how much money to pony up in a joint investment, without knowing how much the other person will contribute. Often another feature is added: an option to punish the other person, say, by spending a dollar to dock earnings by two dollars.

In a series of such experiments, Jeffrey Carpenter and Peter Hans Matthews, economists at Middlebury College in Vermont, have found that depending on the costs of imposing penalties and the circumstances, 10 to 40 percent of people will act on their referee instincts.

"The urge to punish seems very strong," Carpenter said. "Some people will spend money to punish even if it has no effect on them - if they're watching players in another game and can penalize people. They're inequality averse, it seems."

The conscious psychological motive for this behavior, regardless of its effect, is typically not deterrence but what some psychologists call just-deserts retribution. In a landmark 2002 study, psychologists at Princeton University had more than 1,000 participants evaluate vignettes describing various crimes and give sentencing recommendations. The psychologists found that people carefully tailored their recommended sentences to the details of the infraction, its brutality and the record of the perpetrator. That is, people valued punishment for its own sake, as a measured consequence for behavior, not as a deterrent.
In a study published last year, University of Pennsylvania psychologists demonstrated how easy it was to influence how often, or how intensely, people acted on such urges to punish. The researchers had students participate in several variations of the investment game. Afterward, another group of students entered the laboratory, examined the results of earlier games and had the option to punish players who they thought deserved it.

A striking pattern emerged among these judges. When allowed to mete out their punishments anonymously, they docked players' earnings very little - about 10 percent of the allowed maximum. But when being watched by the researchers and other participants, the judges' fines tripled in value. "This suggests that when given the opportunity to punish third parties, people don't do it much," said Robert Kurzban, who conducted the study with Peter DeScioli and Erin O'Brien.

The sense of betrayal Americans feel toward Wall Street, and the financial tumult's effects on 401(k) accounts and small businesses, has certainly made many people less laissez-faire in their attitudes toward punishment, Kurzban said. And there is nothing anonymous about the debates over the economic rescue plan: People are stating their views to an audience, and the collective fairness instinct is stoked to high heat.

Fortunately for the economy, researchers say, a strong countervailing psychological force is also at work: the instinct to forgive and to cooperate. Punishments are balanced by peace offerings, and researchers have come close to calculating the rough ratio most people employ.

The upshot of all this, researchers say, is that human beings prefer cooperation, both in their individual makeup and in the makeup of their social groups.

"The forgiveness instinct is every bit as wired in as the revenge instinct," McCullough said. "It seems that our minds work very hard to get away from resentment, if we can."