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First impressions are more important than early intervention: Qualifying broken windows theory in the lab

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ABSTRACT

Broken windows: the metaphor has changed New York and Los Angeles. Yet it is far from undisputed whether the broken windows policy was causal for reducing crime. The scope of the theory is not confined to crime. The theory claims that crime is inextricably linked to social order more generally. In a series of lab experiments we put two components of this more general theory to the test. We show that first impressions and early punishment of antisocial behaviour are independently and jointly causal for cooperativeness. The effect of good first impressions and of early vigilance cannot be explained with, but adds to, participants' initial level of benevolence. Mere impression management is not strong enough to maintain cooperation. Cooperation stabilizes if good first impressions are combined with some risk of sanctions. Yet if we control for first impressions, early vigilance only has a small effect. The effect vanishes over time.

1. Motivation

Times Square, Manhattan, 1990: clearly not the place to be. You would have met all sorts of outcasts and would have exposed yourself to a serious risk of violent crime. Times Square, Manhattan, 2000: indulge in the world's most vibrant city, at its best. Don't be afraid of violence. The crime rate is substantially below the national average.[1] Usually Mayor Rudolph W. Giuliani and New York Police Dept. Commissioner William Bratton are credited with the success (Zimring, 2007). In recent years, William Bratton has repeated the New York success in Los Angeles (Wagers, 2008). In both cities, he explicitly relied on the "broken windows" policy (Kelling & Coles, 1996; Skogan, 1990; Sousa & Kelling, 2006; Wilson & Kelling, 1982).

In public perception broken windows theory is often equated with the abatement of crime. Yet this narrow reading misses the very point of the approach. The very essence of broken windows theory is the claim that crime is not by any means different from mere social disorder (see, e.g. Wilson & Kelling, 1982:5). If society does not care about social disorder, for minor that it may appear, it is on a slippery slope to ever and ever more severe forms of disorder and, eventually, crime. Crime is only the most manifest, and the socially most dreaded, expression of an effect the theory predicts if social order is visibly eroded, and not proactively restored. If society learns how to maintain social order more generally, by this very fact it keeps the risk of crime in check. In this paper, we exploit the generality of the theory and test two of its key components in a laboratory environment where social order is difficult to maintain. Specifically we test the following two claims of the theory: (1) depending on first impressions people make in an environment, they behave differently. Metaphorically speaking, the first broken window changes a neighbourhood. (2) If individuals quickly realize that their attempts at antisocial behaviour trigger a sanction, this tames antisocial behaviour. We expect that all debating the broken windows approach would want to know whether these implications of broken windows theory hold true.

The broken windows approach was inspired by an experiment conducted by Philip Zimbardo in 1969. Zimbardo simultaneously placed two otherwise identical cars in public spaces, one in the Bronx, the other in Palo Alto. Neither car had license plates, and the hood was open. Within 26 hours the car in the Bronx was totally

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[1] For details, see Uniform Crime Reports, at http://www.fbi.gov/ucr/ucr.htm.

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pillaged and destroyed, while the Palo Alto car stayed pristine for an entire week. Once the experimenters themselves broke a window with a hammer, it went to ruins within hours, even in the sheltered and prosperous Californian town (Zimbardo, 1969).

Correlation analysis supports the claim that the broken windows policy, measured by the number of traffic tickets (Wilson & Boland, 1978), the number of arrests per police officer for disorderly conduct or driving under influence (Sampson & Cohen, 1988) or the number of misdemeanour arrests (Corman & Mocan, 2005; Kelling & Sousa, 2001), contributed to the decline in serious crimes, even if one controls for economic conditions and for crime deterrence (Corman & Mocan, 2005; see also Cruz Melendez, 2006 for the link to the "Moving to Opportunity" Program). Along the same lines, time series evidence from Switzerland shows tougher enforcement of mild crimes to reduce the incidence of severe crimes in later years (Funk & Kugler, 2003). In Los Angeles, neighbourhood deterioration preceded the onset of crime rates (Schuerman & Kobrin, 1986). Yet, other studies did not find a significant effect (Geller, 2007; Katz, Webb, & Schaefer, 2001; Novak, Hartman, Holsinger, & Turner, 1999). They used a complex index of perceived social disorder as the independent variable (Sampson & Raudenbush, 1999). Information about law-abiding or the number of abandoned buildings did not have a significant influence either on young males' beliefs about the risk of being convicted (Lochner, 2007); (see also the mixed results by Rosenfeld, Fornango, & Rengifo, 2007; Taylor, 2001) (further see Blumstein, 1995; Bowling, 1999; Messner et al., 2007: on the link to the exogenous evolution of the drug market). Yet others argue that the broken windows approach should be embedded into a broader assessment of the relationship between neighbourhood change and crime (Fagan, 2008; Taub, Taylor, & Dunham, 1984). Most importantly, it is far from undisputed whether correlation can be interpreted as causation (Harcourt, 1998, 2001, 2005; Harcourt & Ludwig, 2006; Karmen, 2000; Sampson, Morenoff, & Gannon-Rowley, 2002).

In the field, the fact that the window is not fixed (that panhandlers are free to molest passers by; that drunks congregate in the park; that rowdies menace shopkeepers) also gives a signal to those who have always been living in the area. They may read this as evidence that social cohesion is eroding. Yet normally they have many more sources of information, from which they draw their personal conclusions. They talk to each other, they read the local newspaper, they address themselves to the authorities. Therefore, in the field the effect of the signal is hard to identify (cf. Fagan, 2008:109 f. on identification problems when estimating the relationship between neighbourhood change and crime). Equally hard is identifying the motives of those who seem to behave differently. Do they move to another neighbourhood simply because they can afford it, because they want to send their children to a better school, because a new street has brought another suburb within reach – or do they move out to protect themselves from the perceived risk of crime? Is the city centre less populated because people prefer to meet in private clubs, because shopping malls in the outskirts attract customers, because people spend more time watching TV – or because they infer from the (real or metaphorical) broken windows that the centre is no longer safe?

To avoid such identification problems, in the experiments reported in this paper we create an artificial neighbourhood. The experimental setting exposes participants to a social dilemma. Individually, each participant is best off if the remaining group members contribute to a joint project while she freerides. Participants interact in a randomly composed group of four over ten announced periods. This design gives us a clean measure of (anti-) social behaviour. The less a participant contributes, the more she imposes damage on the remaining group members.

For our first research question, the explanatory variable of interest is the impression participants happen to gather in the first period. We operationalize this as the mean contribution by the remaining three group members, in the first period. We measure the causal effect of first impressions on contributions in later rounds. First impressions do indeed have strong explanatory power. The effect does not collapse with participants' idiosyncratic social value orientation, as expressed in participants' own contribution to the public project in the first round of interaction, i.e. while they are unaware of the cooperativeness of the remaining members of their group. The average amount the remaining group members have contributed in the first round explains their choices until the penultimate round; in the final round, selfishness wins the day, even with participants who were willing to support the joint project in earlier periods. The effect of first impressions does not disappear if we control for learning, as expressed in an individual's contribution in the previous round. The effect is visible for participants who have contributed more, and for those who have contributed less than the average of their groups in the first period. It thus is not confined to those strongly, or to those little socially minded.

Broken windows theory has been heavily used in criminal policy, as a motivation for and justification of zero tolerance with respect to petty crime. One should therefore expect that would-be offenders are more likely to desist from antisocial behaviour if they are deterred. One could further expect that community members are willing to police disorder themselves if given the opportunity, but that they are less likely to do so if they have reason to fear for revenge. This is essentially what we find. If participants are able to express disapproval and deter freeriding through costly punishment, with sufficiently favourable first impressions cooperation is stabilized in the long run, even if those punished are given a chance to strike back. If sanctions are excluded by design, cooperation decays. But conditional on first impressions, average contributions are higher, and the decay is slower.

For our second research question, the explanatory variable is reactions to antisocial behaviour in the first round of interaction. If we control for first impressions, the effect is small in early rounds, and becomes insignificant in later rounds. The critical cause is first impressions, not early vigilance. This is an important piece of news for the policy debate. In public perception, broken windows policies have been associated with being tough on crime, and on petty crime and disorder short of criminal infraction more specifically. Our data suggest that this is at most a secondary cause. If freeriders realize that crime and disorder have consequences, they behave better. This, in turn, gives others a better impression of the kind of behaviour to be accepted in this society. These impressions are key, not punishment per se.

Experiments of necessity pay a price for control. They have to abstract from many features of the real life phenomenon they aim to explain. Our experiment is no exception. We abstract from the possibility that perceived disorder attracts criminals to a community who did not inhabit it before. We are not studying the sudden change of a previously orderly neighbourhood to the worse, but have everybody start from scratch in a new environment. In our setting, disorder and crime are only distinct by the degree of antisocial behaviour, and are not qualitatively different. Loyal participants may at most fear losing some of their experimental income, not their lives, health or belongings. Despite all these simplifications, we believe the price for experimental control to be affordable.

The closest analogue in the field is the behaviour of those who newly arrive in a neighbourhood, be that a family who moves in, a child who goes to a new school, or a person who visits a new area. That way, our results also speak to the class of persons broken windows theory is most interested in: criminals who consider entering a community since, reading the signals, they believe they stand a fair chance to get away with their illegal acts.