



Risk Reduction

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Looking at the interventions that have made use of risk terrain modeling in recent years, we have uncovered some interesting outcomes regarding the ways in which the police have used information about crime events and risky places. The Intervention Planning Intel Report (IPIR) for Glendale, Arizona, for example, suggested that robberies are likely intertwined with the actions of drug buyers in the city. This is perhaps intuitive to some people, and so it was not necessarily all that profound an observation to police officers, except for the fact that it was deduced strictly by looking at the outputs of the risk terrain model.

When comparing across weekend and weekday risk terrain models, areas with high densities of drug calls-for-service (CFS) turned out to be significant attractors for robbery crimes all week. The relative risk value (RRV) for drug CFS on weekdays is 12.16, but the RRV increases to 19.87 on weekends. ATMs have a RRV of more than 4 on weekdays, but are absent from the weekend risk terrain model.

Police officials explained that paychecks are dispensed to many employees on Thursdays via ATM machines (i.e., payroll debit cards, rather than paper checks). On the weekend, convenience stores pose a significant risk of robbery (with a RRV of nearly 3), but this factor is absent from the weekday model. Therefore, the spatial dynamics of robberies in Glendale suggest people get robbed near ATMs on weekdays and near convenience stores (for their cell phones) on weekends. Convenience stores have "recycle" kiosks that give instant cash for "used" cell phones. So, these two outlets for "fast cash" help fuel the purchase of drugs, which increases on the weekends.

Risky places in Glendale were selected as target areas and, therefore, received more attention from the police, including high visibility patrols, introductory and educational contacts with the public, and enhanced outreach and referrals to social services among drug users (buyers). What we did not anticipate from this (arguably person-focused) intervention strategy was that even though fixed features of the landscape that raised the risk levels were not directly altered through these specific activities, the crime rate significantly dropped (by more than 50%) over three months. We know from our outcome evaluation that arrests did not significantly increase in the target areas during the intervention. So, the police department's overall effectiveness increased not as a result of more arrests or related law enforcement actions, but as a result of their more focused action plan and coordinated long-term goals/objectives within well-defined illegal behavior settings. As several recent law review articles explain, methods such as risk terrain modeling can help courts and police departments narrowly define "high-crime areas." Using quantitative data to define micro places as having a high propensity for crime is essential for protecting Fourth Amendment rights.



In this and other applications of RTM, risk terrain maps are used by police to determine where to go to find attractors and precipitators of illegal behavior. Comprehensive risk reduction strategies, though, should involve more than mobilizing only police; other agencies (e.g., parole, probation, social service agencies, medical clinics, code enforcement, public works, sanitation, etc.) can monitor places over time to reduce the risks that such things as environment, poverty, recidivism, drug abuse, and so on might have on crime. Allowing communities to suffer from decaying infrastructure, poor code enforcement, or inadequate sanitation can promote the types of problems that intensify risky places and support crime.

Risk reduction strategies require fully informed risk narratives so that policies and practices can be proposed to mitigate spatial influences, modify deleterious conditions, bolster protective factors, and interrupt the interactions that lead to crime outcomes. In contrast, currently popular policing strategies operate on the basis of responding to crime occurrence, targeting areas based on what has happened previously as a way of suggesting that if it happened in this location once, it will happen there again. An important aspect of risk reduction is that it extend beyond a focus on opportunities for crime or the “crime triangle”, and, instead, target all aspects of the context that raises the risk that crime will occur.

Police actions have an important role to play in affecting the risk terrain. They can deter offenders, embolden victims, and assist in the hardening of targets. These products can have the overall impact of reducing crime occurrence, but we need to separate what we would see as risk reduction strategies from prevention and response. A risk reduction strategy that follows an ACTION plan requires that we identify the environmental conditions in which crime is likely to appear, based on diagnostics from risk terrain models. We then propose strategies to address these conditions and interrupt the interactions that lead to illegal behavior settings and crime outcomes. It appears logical that police would go to where crime incidents concentrate. And police dealings with people at hot spots may have the effect of deterring criminals or even reducing crime counts at these areas in the short-term. But, despite this, the underlying spatial factors that attract and generate problems in these areas do not go away.

Risk terrain modeling provides an approach to understanding crime occurrence by identifying the relative influences of factors that contribute to it; risk terrain maps inform decisions about which places or areas can be targeted to reduce these risks. Reiterations of RTM and reconsiderations of risk narratives make risk reduction activities transparent, measurable and testable.

