

Questions from the audience with answers from John Eck

- 1. Identifying a risky place seems fairly easy when all the crime data for a geographic area is available. Is there a method for determining if a place is risky if only the crime data for the place is available?**

No satisfactory solution springs to my mind. The analysis underlying risky facilities requires site to site comparisons among similar places. Some educated guesswork could give you a sense of whether the place you are looking at is risky is possible. If you know the number of facilities in an area, of the kind you are examining and you know the average crime level among them, then if your facility has the average or higher number of crimes, it's likely to be risky.

- 2. Which is more accurate representation of crime concentration: with zero-crime places (all places) or without zero-crime places (only positive-crime places)?**

There is not a general answer. It depends on what you are asking of the data. There are some answers you cannot get without the zeros, and there are answers that require elimination of the zero event places. If your question is about crime involved places, then exclude the zero: for example, of all the places with crime, which are the worst? But if your question is about places in general, then include them: for example, are most examples of this facility low crime or no crime, and what percent are high crime?

- 3. What would constitute as the minimum volume of crime necessary to detect this pattern? This is similar to the minimal sample size problem we confront in all research.**

There is no specific answer. Personally, I become uncomfortable with fewer than 10 places and feel comfortable with 50 or more. But I have seen a clear example of risky facilities analysis for a small town with five bars. If the crime being examined is very common, a few places might reveal the curve. With scarce crimes, even hundreds of places might not be enough.

- 4. Do these ideas and theories around risky facilities relate to online crime? If so, how?**

Probably. There is some evidence that internet deviance is concentrated on a relatively few servers. Also, many phenomena show the distributions like

facilities: earthquakes and landslides, wealth distributions, carbon uptake by trees in the Amazon, baseball world series winning, citation counts, etc. So it is quite likely the internet operates this way too.

5. **This information feels like it supports Crime Free Multi-Housing and their role <http://ww.crime-free-association.org/multi-housing.htm>**

This is more of a comment I suppose rather than a question. Thank you.

6. **In terms of Performance Requirements, you indicated that you give total control to the operators to come up with strategies. Is it best-practice to provide some clear objective statements that help guide the end users on strategies that work – in order to avoid having user groups creating new unanticipated security risks? i.e. Reduce security risk by building greater community capacity in this area.**

I presented standards and performance regulation as if they were polar opposites. In practice, there are hybrid forms. For example, one could set a threshold, below which no regulations apply. For crime levels over the threshold, the violators must implement specific standards. One should consider that if a government demands place managers apply a standard, there should be scientific evidence that complying with the standard is likely to lead to useful outcomes. Standards should not be wishful thinking or common wisdom only.

7. **Are there any cities where regulation pertaining to standards and performance have been effective in mitigating crime at risky places?**

Yes. The evaluations vary in quality, but we do have reasonably strong examples of success. My daughter and I reviewed some of this literature. See Eck, John E. and Emily B. Eck. 2012. "Crime Place and Pollution: Expanding Crime Reduction Options Through a Regulatory Approach." *Criminology & Public Policy* 11(2):281–316. The research on Third Party Policing also shows evidence.

8. **Yes... and that is the issue. Getting owners and operators to take that responsibility. Most expect the police to respond. How do we change that???**

There is no simple solution. Much depends on what we are asking of owners and operators, and how we are asking. It's important to remember,

for any facility type, most place managers are doing fine. So imposing a regulatory burden on them will result in justifiable push-back. For the small proportion who cause most of the problem, how we get them to assume responsibility varies. At one extreme, we can petition the courts to require the place to comply or cease operations. Super controllers may help. See Sampson, R., J. E. Eck, and J. Dunham. 2010. "Super Controllers and Crime Prevention: A Routine Activity Explanation of Crime Prevention Success and Failure." *Security Journal* 23(1).

- 9. Greetings from your neighboring state. Thank you John for providing us an excellent review of the concept and application of risky places/facilities. How do we distinguish hot spots and risky places? Could you please give us some pointer if any. Thanks. Mangai Natarajan.**

Thanks Mangai. Briefly, the concept of "hot spot" is vague and varied. We can think of a high risk facility as being an address level hot spot. Many forms of hot spots cover streets and multiple blocks, thus incorporating numerous facilities, most of which are cold.

- 10. Very interesting talk. Can you tell us more about how specific facilities are related to specific crime types? For example, street robbery.**

There are links between facility type and crime type, as you expect. A retail store is more likely to a site of thefts than drunken brawls, for example. A facility presents a narrow range of opportunities, in other words. That said, some facilities may present opportunities for many types of crime: apartment buildings can be hot spots of theft from vehicles, burglaries, domestic violence, and so forth. A convenience store across the street might be a hot spot for robberies or drug dealing. Street robberies occurring on public streets may be difficult to attribute to specific facilities, but if they occur in parking areas owned by private businesses, then place managers are implicated.

- 11. Just a comment...I think instead of capping the number of calls for service, it might be a better idea to increase the tax of the property due to the unusual number of calls-possibly due to bad management practices.**

Yes. Fines, fees, and taxes are useful regulatory instruments. And do not forget subsidies and positive incentives. See Eck, John E. and Emily B. Eck. 2012. "Crime Place and Pollution: Expanding Crime Reduction Options Through a Regulatory Approach." *Criminology & Public Policy* 11(2):281–316.

12. Do you have any suggestions for gaining entry level experience in criminal data analysis?

Depending on your needs and skills, volunteering or interning with a crime analysis unit might be a way. You should have skills in data analysis, database management, or spatial analysis/mapping.

13. Thanks a lot for a great presentation. Do you have any suggestions or alternatives perhaps, for regulators instead of the police as mentioned?

Sadly no. Here creativity meets political expediency and capabilities. One may want to consider this as an evolving strategy. In Cincinnati, the city council, years ago, told the police department to regulate high crime apartment buildings. After several years, they shifted the responsibility to the City Attorney's Office. In reality, the City Attorney's Office works with the police.

14. Have you seen any variables that are connected to a high crime number from many different kinds of risky facilities? E.g. if the high crime bars/apt/churches etc. are all located in the central area? And is this dependent on what kind of crime you look at?

The evidence so far suggests that high crime places in general, and facilities in particular, do not exclusively show up in one part of a city. Further, one often finds high crime places very close to safe places. I am skeptical of a single or multiple variables that are strongly correlated with high crime. Weak correlations abound. One reason for this is that we do not measure capturing managerial practices at places. Without these measures our data sets will not contain the variables.

15. No question but just wanted to say that I really appreciate this presentation. I am going to work this into my work with Data-Driven Approaches to Crime and Traffic Safety (DDACTS). Debra Piehl.

There is some overlap. Place managers for roadways are often governments so highway engineers, police and others have responsibility. Crashes often cluster in specific locations. See Corsaro, Nick., Daniel W. Gerard, Robin S. Engel, and John E. Eck. 2012. "Not by Accident: An Analytical Approach to Traffic Crash Harm Reduction." *Journal of Criminal Justice* 40(6).

16. Isn't there a risk of increasing underreporting if the performance regulation approach is used?

That depends on the circumstances. Underreporting, or more specifically suppression of reporting, may be a difficulty a regulatory regime must address. For example, if landlords are penalized for calls coming from their buildings, then domestic violence reporting may be suppressed (see for example, Desmond, Matthew and Nicol Valdez. 2012. "Unpolicing the Urban Poor: Consequences of Third-Party Policing for Inner-City Women." *American Sociological Review* 78(1):117–41.) Not counting domestic violence calls could address this problem. Bars might suppress calls about fights, also. That said, we have to ask whether all call underreporting is bad. Should we worry that a store might not report a shop lifter? My instinct is to not worry too much about that. If a store has far more shoplifting events than other stores, they need to alter their business practices, not shift the costs onto the public.

17. What crimes are used for the plots shown today?

That varies from slide to slide. Some are all reports of serious (U.S. Part I Crimes). Some are property or violence. For example, the bar chart for Cincinnati bars reported on violence. The Chula Vista motel study displayed all calls to the police coming from motels.

18. Does John expect the covid 19 pandemic to make risky facilities more or less risky? Would he expect the shape of the curve to be curved the same? I.e. a small % of any/every type of facility would still have a large portion of crime. I look forward to an answer to this question.

Perhaps someone listening will examine the data. Here is my bet (not a prediction or vision of the future). The characteristic risky facility curves will be preserved, but the total volume of obnoxious events will decline (the

decline will depend on the facility type – stores down but hospital emergency rooms may increase, for example).

19. What should the enforcement mechanism should be? Have you considered insurance companies? Since nearly all business have insurance, many governments already require as much to keep business licenses, and insurance companies have a vested interest in risk abatement perhaps encouraging them to consider these principles would be a great starting point. Thoughts?

If you look at the regulatory instruments (“instrument” is the technical term used by environmental economists) used in pollution control or other areas, you see that all manner of ways of providing incentives have been applied. Some provide negative incentives and other apply positive incentives. The creativity behind these instruments is amazing, but everyone is based on the particulars of the industry and pollutant being regulated. In contrast, in criminal justice, we use a limited set of options. For a portfolio of regulatory options, see Eck, John E. and Emily B. Eck. 2012. “Crime Place and Pollution: Expanding Crime Reduction Options Through a Regulatory Approach.” *Criminology & Public Policy* 11(2):281–316.

20. Is there a specific quantitative definition for the law of concentration? Then does it depend on the unit of analysis (facilities/owners etc.)

I love numbers, quantification, measurement, and analysis. That said, we often seek to quantify the unquantifiable. We number nerds are uncomfortable in an unnumbered environment. David Weisburd suggests the concentration falls within a narrow range (see Weisburd, D. 2015. The law of crime concentration and the criminology of place. *Criminology*, 53(2), 133–157.). He might be right, but given the crappy data all crime scientists must handle, I am skeptical. The level of aggregation does matter, however. If you include the zero crime units, then the less the aggregation the more the concentration: crime is more concentrated at addresses than street segments and more concentrated at segments than neighborhoods. If you exclude zero crime units, then the differences decline a great deal and may disappear (there is a whiff of a scale free phenomena here, but with the limited evidence, is only a whiff).

21. Thanks for the great presentation. You mentioned that you haven't been able to find any example of NON j-curve type concentration, and you are asking us to surprise you with an example of a crime concentration distribution that doesn't resemble a J-curve. But if I simulate data, then quite small differences in crime attraction/riskiness levels per unit of analysis, you'd already get a distribution that starts to resemble a J-curve. My questions: How different do you want the distribution to be from the standard J-curve in order for you to be "surprised" about this finding? Or are you only satisfied with a counterexample in which x% of crime is concentrated in exactly x% of places? (which doesn't make sense to me) Wouter Steenbeek.

Wouter, fantastic question. The greater the departure from the J the better. With small differences, we will get into endless quibbling serving only those wanting to publish a great deal. I would like to see a suspicious departure from the J curve for two reasons. First, I am always suspicious of absolute consistency in findings. It seems too much of a good thing. Second, and more important, a contrary finding might shed light on why the J curve shows up in many circumstances. We now have something to compare to. What are the characteristics of non-J v J facilities? How are they similar and different? Looked at in this light, a weak J a strong J comparison may be useful.

22. In response to the current Q&A; some places that have 0 crime experience 0 crime because it's impossible for crime to be committed there (eg. No car theft because there are no cars). But other places have "true" 0 crimes. So if you keep in all places with) crimes it doesn't really capture it well, but if you remove all places with 0 crimes you err on the other side...? Wouter Steenbeek

Yes. Your question raises the importance of being more crime specific than I have been in my presentation. Bank robberies follow this distribution, and by definition these can only occur at banks. If I were studying car crime, I might start with a list of facilities where cars are likely (e.g., car parks, housing estates, etc.) then try to create the curves for car crime for each facility type. I would not look at facilities where cars are unlikely, at least in the beginning.

23. Regarding the performance caps".. so many crimes allowed at most. " But, place managers may be only one part of the problem. Maybe the

neighborhood is the problem but not the place. How can you hold the manager responsible for that? How would you distribute responsibility to place managers vs other external factors? Rustu Deryol

Hi Rustu, I am glad you could join us. Let me begin by saying I am not a fan of neighborhoods as a unit of analysis. I much prefer to start with the smallest definable tangible units and work upward. One reason is that we find very high crime facilities in high and low crime neighborhoods, and in high crime neighborhoods we have high crime and zero crime facilities in close proximity. So if there is a neighborhood effect, its small and subtle. Another reason is that owners of facilities almost always attempt to differentiate their location from its surroundings – to draw a boundary to keep out neighborhood effects. Buildings are the most obvious indicator of this. So a well-managed place will be loosely coupled – not tightly coupled with its surroundings. Place managers will choose which neighborhood characteristics to admit and which to exclude. Cells are a useful analogy; they are semi-permeable and exercise control over what passes into and out of themselves. As a starting point, we should see places the same way. They cannot function if neighborhoods dominate how they operate. Our fixation on neighborhoods is a historical artifact of the fact that for decades we only had data at high levels of aggregation. Now that we can see smaller details, we need to determine what preconceptions of neighborhoods we should abandon and which we should keep.

24. Dr.Eck, if I have the data for all facilities you list before, should I include all of them (category) into the study when running a model?

I am not sure what you mean by “all facilities.” So I will assume that you have a data set for a large area and you have address level data showing which places belong to which facility type. That is you know which places are apartments, single family homes, funeral parlors, churches, etc. And that you have crime data you can attribute to addresses with reasonable accuracy. If you throw all places into the analysis you will be replicating Sherman et al from 1989. That might be a useful start. To do risky facility analysis, look at each facility (sometimes call land use) separately. You may also want to be crime specific. The charts I showed are not models, but statistical distributions.

25. My question: Do we have some data about crime reporting (or not reporting with a regard to particular types of Place managers?)

No. We have no typology of place managers or place management practices. There is one slide that hints at this, vaguely: the motel slide showing the difference between national chains and local independent motels. It's quite possible that national chains operate very differently than local independent motels (for one thing, they have greater access to capital and can advertise). One might imagine a study of bar managers in which you asked them about how they deal with fights. Better yet, you observed how they behaved. I think that we need to look at most places with the eyes of a business school researcher rather than with the eyes of a criminologist. We are looking for business practice differences. My hunch is that we would find that, everything else being as equal as multivariate analysis allows, high crime places are low profit places; that high crime is a marker of poor business practices overall, and even incompetence. I would not start with looking at the personal characteristics of the place manager (unless you are only seeking a quick publication in some academic journal).