Q&A – 9 December 2021 - Prof Martin Andresen

1. **Can you separate outdoor assaults from indoor assaults? domestic from non-domestic assaults?**
   That all depends on the nature of your data. I have worked with data from the police in both British Columbia, Canada and Queensland, Australia that have an indicator of where the criminal event occurred and whether it was classified as domestic or not. I don't have access to such data right now though.

2. **Do you have data with location of arrestee's residence linked to location of where offense or arrest occurred? Can you thus study import and export of assaults among neighbourhoods?**
   I used to have access to such data but, alas, no more.

3. **Doesn't multi-level imply multicollinearity?**
   No necessarily. If you are measuring the same variable at different scales there will likely be collinearity between those variables, in the same manner that you will have collinearity if you include a linear and quadratic term. But that isn't a sufficient condition for problematic multicollinearity. Remember that, unlike what a lot of social scientists think, multicollinearity does not cause bias and is not inherently problematic. If you think it does, show me a proof….I know you can't ☺
   From what I understand (I am no expert in multi-level models!) the statistical problem that emerges is a violation of the independence of errors/residuals. Multi-level models are one technique for incorporating variables at different levels and controlling for the lack of independence of errors.

4. **In addition to City and cellular sources of data, consider the use of data from the regional planning agency and, in particular, the transportation modelling group. They have to model travel flows between where people live and where people work or shop (and, sometimes, intermediate trips). They are continually updating data sources on mobility. It's a very rich data set that will provide models of travel behavior that can be useful for crime analysis.**
   This is an excellent suggestion for data. Data such as these could be quite valuable for measuring ambient populations at different times of the day and days of the year. They could also be useful for measuring risk for people depending on the type of transportation they are using.

5. **How do we measure the risks of specific facilities - specifically addresses/buildings within this spatial composition- street segments and areas- can and how we separate the risks by the streets, addresses and neighbourhoods. Any pointer to the data?**
   I haven't seen police data that would allow for such measurement. Sometimes police data will have some free text information that may let you know of the specific facilities within an address of where the crime occurred. This can even be a problem for burglaries within an apartment building. The trouble with the free text is that it often contains private/confidential information such that it cannot easily be released to researchers. The only thing I can think of is the need for field work in these areas that includes victimization surveys.

6. **Thanks for your presentation. How do you measure the security of informal urban settlements?**
   As Vania mentioned in the seminar, they are using remote sensing data that has a resolution of approximately 1 metre by 1 metre. So that's amazing! Similar to the above, I would suggest field work with victimization surveys.

7. **Other travel modes can be modelled, too, such as personal car travel, bike travel, walking, and so forth.**
   Yes and as noted above, this could prove to be very interesting for measuring risk across different transportation modes.

8. **How can spatial planning reduce this insecurity in informal urban settlements?**
   I have no idea!

9. **There have been suggestions on using crime harm indices instead of rates and counts of crime (Sherman/Crime harm index, Rattclife, etc.) Would this approach make a better measurement of risk in space? I think that findings showed greater crime concentration in these cases (around 1% for 50% of crime)**
   I have mixed feelings about these metrics. I definitely see the value because they consider how severe each criminal event is, but they are also aggregations and we know that different crime types have different spatial patterns. Canada has one of the longest running (the longest running?) indices, the Crime Severity Index. It has been shown to be highly correlated with the crime rate (so m=how much value does it add) and also unfairly stigmatize low population areas because it suffers from the same issues as crime rates with denominators. See: https://onlinelibrary.wiley.com/doi/abs/10.1111/cag.12703

10. **Douglas Wiebe's talk earlier in this seminar that went into how risk changes throughout a journey.**
    This would be very interesting to study. This would be contingent on the type of facility one is spending their time at and the type of transportation in between nodes.