Q&A – 11 February 2021 – Beth Hardie

1. Data collection: Are social interactions (who people were with each hour) detailed to permit social network analysis (e.g. egonetwork or community-level network)?

The data collected by PADS+ (Peterborough Adolescent and Young Adult Development Study) did not focus on social networks, but the methodology can fully allow for this. Many research questions and foci could be incorporated into a bespoke STB (Space-Time Budget) study.

2. Have you considered incorporating real-time digital information regarding movement etc. from cell-phones, watches, heart-rate monitors etc. Also, text messages that ask how the person is feeling, what they are thinking or doing at the moment?

Some of this data (e.g., heart rate) would not be directly relevant to the research questions of PADS+, which are determined by SAT (Situational Action Theory), but could be added to studies using STBs for different research questions. Other data might be useful to elaborated or more-in depth studies or applications of SAT (e.g., affect data), but was not collected for PADS+. Some of these kinds of data might have been useful to PADS+, but weren't really that necessary. For example, as part of the intensive 1-to-1 STB interview, exact location was usually determined without any GPS data. There were some occasions where a GPS location might have been helpful when participants did not know exactly where they were, but we were often able to work it out with them using maps and local knowledge. GPS data also comes with its own challenges and doesn't *necessarily* make for better location data. In any event, the GPS data could not replace the STB interview, though in a modernized PADS+ STB design it might save some time. Again, this was not the focus of the STB of PADS+ but depending on the research question, or the sample, some of these additional methods and data might be crucial. There is no limit to the kinds of data that can be brought together via the STB.

3. Your ''Coleman boat'' in the beginning of the presentation was macro→ micro→micro→macro. It emphasized the micro → micro and you also shortly mentioned the macro → micro. The transformational arrow was there but you didn't go into this. But for many macro-level outcomes, it turns out the *transformational* arrow is one of the most challenging: how do actions of individuals influence each other and aggregate to macro-level outcomes? (for example, ABM can be used to simulate potential macro outcome, hopefully leading to understanding of the transformational mechanism). To me, it seems Situational Action Theory is indeed about person-in-situation and explaining individual action, and not about how individual actions aggregate to produce (e.g) geographic patterns of crime (and nothing wrong with that, if that's your focus!). But is it? Or is my view of SAT to narrow? Can you tell a little bit more about the micro→macro transition and how it fits in Situational Action Theory?

SAT absolutely covers this. I wonder if this question came earlier in the presentation because I think the example analysis I showed (taken from our Breaking Rules book) shows how SAT and the PADS+ data (pulled together using the STB as the lynchpin) can explain geographic patterns of crime. This can be done at different levels of aggregation depending on the

research focus, especially when the STB method is made bespoke for a particular research focus.

4. Can you use EEG or other portable neuroimagining technology to gain deeper insight into the neurocognitive foundations underlying perception and processing of a situation? Perhaps recreate environments in the lab with VR or AR while recording neurocognitive activity?

Yes. Some people are currently really interested in the application of SAT to these kinds of research questions and the implications for research methods. There are challenges to overcome, as is always the case when matching method to research question, theory, and concepts; but perception and cognition play a part in the processes described by SAT and so can and should be studied and tested using these kinds of methods. The key point is to not lose sight that perception and cognition are situational processes, that is, the features of the individual and the features of the setting they are in, and their interaction, are all relevant.

5. Have you ever compared the behavioural data reported by participants in the STB with their actual behavior (eg GPS data) and checked to what extend it matches?

We did some validation work using various existing and independent data sources, which was pretty pleasing in terms of different kinds of validity (see our book Breaking Rules), but we have not validated the spatial location data reported in the STB interviews using GPS. Bear in mind that the first wave of PADS+ data pertains to 2004, when collecting GPS data on a large scale was an entirely different endeavour. This kind of technology has only become really accessible to researchers on a large scale very recently. This might be something to consider in futures waves of PADS+, both for data validation, and as an additional (rather than replacement) spatial measure.

6. The PADS study shows what people reported, that they do. However, GPS tracking/participatory GPS mapping shows, that there are gaps in this interview data about time-space activities. But my question is different: I wonder whether you collected also some data what people can do in those areas, as an alternative to doing crime and breaking rules. For example, it can be because of poor leisure time infrastructure.

I'm not sure I fully understand the question here. The PADS+ participants reported what they were doing, which, for the vast, vast majority of time, was not crime or rule-breaking. So yes, we have a lot of data about what people do in particular places, even if that is not what that place is intended for. The data structure facilitated by the STB also allows for all sorts of information about the places to be added to the dataset (for each person-hour spent in that place), which would allow for a study of leisure-time infrastructure and it's role in the criminogeneity of settings.

7. Have you been inspired by that time geography? There is a well-developed time-geographical conceptual framework about activities, restrictions, etc. in time and space and ways to illustrate this! There are clear overlaps with your approach. Time geography was developed from the 1960s by Professor Torsten Hagerstrand (Lund University, Sweden).

I think I answered this question in the session. This work is indeed inspiring. It certainly helps when thinking about activity fields, and the presentation of them. It was probably Vania who put this work on my radar when we worked together on PADS+ many years ago and I know that fellow Swede and mastermind of SAT and PADS+, P-O Wikström, is aware of this seminal work. There are indeed overlaps, however SAT and PADS+ take quite a different approach because the aim is to explain action. SAT provides a very highly specified model of action, and PADS+ collects the necessary data to test that model.

8. In conventional situational prevention, the term 'propensity' doesn't usually appear. I tend to use 'predisposition', and the Routine Activities approach can't make up its mind between 'likely' and 'motivated' offender, and indeed is deliberately uninterested in considering offender characteristics. I welcome SAT's attempt at greater conceptual precision and causal scope, and wonder whether can you say something about how you see the relation between these terms?

As I said in the session, it might be more interesting or relevant to ask this question of P-O Wikström than of me! My take is that starting with a motivated offender misses out so much: what might motivate a person in one setting at one time might not in another, and individuals vary in the degree to which settings influence their perception of motivations (provocations and temptations), action alternatives (which may or may not include crime) and, where relevant, their process of choice. 'Likely offender' refers to risk, which is not the same as propensity as defined by SAT. A high crime propensity, for SAT, isn't about being more likely to offend. It's about being more likely to see and choose crime as an action alternative, thus influencing the explanatory process that leads to an act of crime. I think that ultimately this comes down to the age-old conflation of prediction and explanation – which SAT (and our brand of Analytical Criminology) takes a great deal of care to explicate.

9. In your Person-Environment Interaction model relating the propensity of an environment for crime and criminogenic behavior, are there gender differences? I would guess that the highest clustering is more true of adolescent boys than either adult males or females of any age.

For SAT, gender is an attribute rather than a cause. Therefore, gender differences in crime are the result of gender differences in propensity and exposure. Since the interaction of propensity and exposure is the key causal process, it is these that have been studied the most at present in tests of SAT. Some studies have looked at gender in the context of SAT (Hirtenlehner and Treiber 2017 for example). There is currently various work going on that studies gender as a 'cause of the cause', including work using PADS+ data, and there is no reason why this would not include the role of gender in the explanation of crime concentrations in space.

10. Do you ever look explore why individual choose a location. Movement is not random. Choices are made about the end points of the trip? Or stated another way the teenagers hanging out in parks are not necessarily similar in propensity to commit crimes with young people doing with friends in a home location.

Yes. Selection processes are a key part of SAT and thus selection effects can be, and to some extent have been, studied using the wealth of PADS+ data. In our book Breaking Rules there is considerable analysis of some elements of self and social selection (including the role of individual crime propensity) and the effects of these processes on activity fields. This methodology really lends itself to this kind of study and it would be great to see more of this in future.