



ETHICS COMMITTEE

Friday 17th January 2020, 10:00 – 13:00 hrs

Room LH 8.4, First Floor, Lloyd House, Colmore Circus Queensway, Birmingham, B4 6NQ

Present:

Jamie Grace (JG)	Acting Chair
Anindya Banerjee (AB)	Ethics Committee
Tom Sorell (TS)	Ethics Committee
Rebecca Hemmings (RH)	Ethics Committee
Malcolm Fowler (MF)	Ethics Committee
Rachel Holtham (RH)	Secretariat (OPCC)
Thomas McNeil (TM)	Strategic Adviser to the PCC & Board Member (OPCC)

Other Attendees:

Lucy Naylor (LN)	Business Support (OPCC) - supporting Ethics Secretariat
Nick Walton (NW)	Superintendent (WMP)
Christopher Todd (CT)	Chief Superintendent (WMP)
Davin Parrott (DP)	Principal Data Scientist (WMP)
Sam Todd (ST)	Superintendent (WMP)

Apologies:

Marion Oswald (MO)	Ethics Committee & Chair
Claire Paterson-Young (CPY)	Ethics Committee
Janine Green (JGr)	Ethics Committee
Jennifer Housego (JH)	Ethics Committee
Jonathan Jardine (JJ)	Chief Executive (OPCC)
Louisa Rolfe (LR)	Deputy Chief Constable (WMP)
Peter Fussey (PF)	Ethics Committee

1 -	The Chair welcomed everyone to the meeting and held introductions round the table. JG mentioned it had been agreed that the sexual offences paper can be published in full
2 -	<p>Presentation on the difference between explanatory and predictive modelling</p> <p>Question raised in last meeting on this subject, DP presented where the following points were noted:</p> <ul style="list-style-type: none"> - Explanatory models is where we wish to understand how different factors and variables can lead to a particular outcome to develop an understanding of the problem to be used to inform practice.



- Predictive modelling is generally only interested in how well it makes a particular prediction.
- Example provided was residential property prices in Boston (MA) where main thing interested in here was the house price affected by different variables such as, location, number of rooms etc.
- Example of an explanatory model is a regression model, generally not considered as a black box but has a functional form which can cater for non-linear results. Can also see what contribution each of the features have, i.e. the strength of their effect on the target variables taking the other variables into account.
- Example of predictive model is a random forest. We can know which factors impact on outcome and how important they are, but not how much they affect the outcome. This methodology uses many models (trees), therefore it was argued that when one uses lots of decision trees at once and average out their results as a form of triangulation, that this can serve as a more reliable predictor, it is however hard to follow if there are many models/decision trees. This does however make it harder to understand why a particular prediction has been made due to the complexity of following the many different potential eventualities arising from the presence of multiple variables, and when comparing multiple decision trees.
- Reason why more ensemble/black box methods are used is because they tend to better pick up on interactions and non-linearity and often make better predictions.

The Committee had the following questions:

- What is a black box? DP noted that a black box is where you don't understand the workings of the inner model. It is hard to see what the models are doing – it wouldn't be immediately obvious for example, whether there was a changing correlation that shows a 'u' curve, because you only get the output of the decision trees, whereas a more simple regression model can show more easily the impact of particular variables on arriving at a particular outcome.
- Why is there less discrepancy between model and reality with regards to black box? DP noted that the models do not provide figures. The accuracy will partly depend on the data collected and input into the model, for house prices we would likely introduce variables – TS raises the fact that variables going into model is partly dependent on what police officers say, might vary from other experts or public.
- What are we predicting? DP noted with example used, they are estimating the impact of the different variables on the median house prices in Boston (MA), think of it as breaking the price of a property into the constituent parts in order to isolate the value that arises from having more rooms, location, etc.
- Do explanatory models lead to predictions? DP noted that it can do but ensemble methods generally give better accuracy.
- Pre AI/data science, what's most likely to happen in WMP ops area? What does this add to what's already done? DP noted that yes, explanatory models may back up experience but it may find something different



	<p>The Chair advised that the Ethics Committee may need more data science experts as new members, in order to allow the Committee to deal with the volume of projects originating from the Lab.</p>
3 -	<p>Rasso Investigation Analysis – Results</p> <p>Chair read previous recommendations and subject was given option C outcome from last meeting which asked for the following:</p> <ul style="list-style-type: none">○ That info/data was anonymised○ Safeguards to ensure improved outcome for victims○ Not to streamline work to focus on winnable cases/results come back <p>DP delivered presentation on results and following points were noted:</p> <ul style="list-style-type: none">- Aim was to identify factors that influence outcomes.- Since 2013 number of investigations have increased considerably.- Results explain there is a big problem in success of sexual offences with findings showing there are resource constraints.- There are some key factors that present problems in cases such as:<ul style="list-style-type: none">○ Domestic abuse cases cause more evidential difficulties and make the case harder to prosecute due to lower victim support.○ Some cases take up a lot of time.○ Having physical evidence such as availability of the victim's phone means there is more likely to be a charge.○ Graph presented shows less time for each police officer to devote time to do paperwork on each case, currently there are 16/20 cases per officer, the ideal amount would be 6 cases per officer. The more focus on the case the more likely there is to be a charge.- NW noted that there has been a lot of dialogue within the media over the last 5 years with a significant increase in reporting due to victims coming forward now to do with offences happening in the past, this is regards to the media coverage on Operation Yewtree. But this comes at time of less charging and less referrals to CPS, but improving conviction rates, so this could be an issue with CPS guidelines.- With regards to having the victim's phone as physical evidence, this is proving difficult to get the victim to understand the importance of this as phones are people's lives these days.- Police get accused of pushing victims by asking for their phone and in turn the victims can feel victimised, on occasions where the victim is against handing over their phone this can result in WMP stepping away from prosecuting as victim won't fully support.- Nationally victims groups are raising this at the national level and developing guidelines to help people understand how phones are being used. WMP are in dialogue with independent sexual violence advocates but might not be able to influence. <p><u>The Committee had the following questions:</u></p> <ul style="list-style-type: none">- Could the complexity of phone data make the case last longer? NW noted that, with consent, phones can be plugged into a kiosk with a quick turnaround on results on data. If any material has been deleted forensics can look into it within 24-48 hours. The aim is to have as little impact on the victim as much as possible.- The Chair asked regarding the anonymised data issue. DP noted that in terms of anonymised data there is a match and merge process to ensure



data is appropriately matched, if this was not undertaken within the Lab, another part of WMP would have to undertake the matching, keep two copies of the data which would be very expensive and require additional support meaning projects could be stopped altogether – WMP considers this proportionate.

- Main ethical concern previously was that cases which don't have phones would not be prioritised, what safeguards will be put in place to ensure that victims of sexual violence do not have their cases deprioritised if they do not consent to handing over their phone? NW noted that considering the previous concerns, reality is that this will play out in the court – without the phone data, this often won't get to court due to current CPS practice on prosecutions in this context. Also victim will be attacked by defence in court so will need to prepare the victim for this. NW acknowledge the complexity of the situation and the anxiety felt by many victims around this issue.
- Is it better for the victim to share or not if there is evidential evidence there is a relationship? NW noted that interactions between parties are taken into consideration but again WMP face difficulty getting to court if victim isn't willing to share all details.

The following comments were noted:

- Thanks to DP for the work and detail of analysis, took into account need for wider factors, Committee did however ask for more information. Committee need more communication going forward between meetings if we are to avoid delaying projects. Committee may explore a sub group outside of meeting.
- CT was grateful for observations and confident that the committee will see that the advice has been taken on board and developed into the plan.
- CT also noted that part of this process is about learning in public and transparent way and rightly so, they are learning how to improve the process and the dialogue about the process, some of the papers presented in the meeting were meant to be a few months ago but instead National Data Analytics Solution was scrutinised. There is likely to be too much material again and will need to find a way to work round and ensure urgent materials are brought to our attention so we can find a way to provide advice sooner.

The following general comments were made by the committee:

- This Committee commends the Lab for undertaking this important analysis given the societal problems with successfully prosecuting, convicting sexual violence and the failure to access justice for victims, and the efforts of attending WMP officers to put the work into context for the Committee.
- The Committee however advises that while the use of the results of the RASSO analysis should go ahead, a further clearly-written paper is produced in a manner suitable to inform members of the public on the following points:
 - A clear explanation of how results will be controlled – WMP were not clear whether they will use these findings to cement their beliefs as to



	<p>those cases the CPS will consider or not (i.e. ones where no phone is submitted on request and this inadvertently meaning winnable cases are not put forward to charge simply on the ground of there being no phone)</p> <ul style="list-style-type: none">• A clear explanation of the work WMP will do in light of this (such as better practices of offering victims assurance over their privacy, for example)• A clear explanation of next steps in the use of this important work that WMP will do next (particularly given the public's likely interest in the sensitive handling of these findings and future response), with appropriate assurance that the results of this analysis will not be used to provide a rationale for avoiding the resourcing of difficult investigations. <p><u>The committee therefore makes the following recommendation:</u></p> <p>Outcome B: The Committee advises approving the project with minor amendments</p>
4 -	<p>Youth MSV – Results</p> <p>DP delivered presentation on results and following points were noted:</p> <ul style="list-style-type: none">- This is not intended to be a predictive model – it is exploring trends in existing police data.- Looked at whether there are particular moments in time or other touch points that inform why or when young people get involved in Most Serious Violence (MSV).- There has been an increase in MSV, average age being 19 and mostly males.- Young black males are more likely to be involved in what WMP define as 'gang violence'.- There's a relationship between the more high deprived areas and higher level of crime.- The more central an individual is to a network of individuals involved in a gang, the more likely that individual is to commit knife crime, although this effect is relatively minor when other factors are taken into account such as types of first crime. <p><u>The Committee had the following questions:</u></p> <ul style="list-style-type: none">- Will these findings/results not be used in a predictive way, such as the results being used to inform action against those identified in the research? DP noted not as this was not the intention of the research, but does provide avenues to look at findings more to inform practice, but some issues are better for non-police agencies. A triage with other methodologies have been used.- How do we foresee output being used if not for predictive purposes? Why is this research being done? CT noted this is not about predicting individuals but giving insight into trends, and inform practice of the VRU and getting to root causes of violence. <p><u>The following general comments were made by the committee:</u></p>



	<p>The Committee appreciates that this project focuses on an area of great public concern, and in the public interest and on an ethical basis this work should be progressed to its next phase.</p> <p>The Committee however advises that while the use of the results of the MSV analysis should go ahead, a further clearly-written paper is produced in a manner suitable to inform members of the public on the following points:</p> <ul style="list-style-type: none">• A clear explanation of how the findings will (such as providing examples for the public as to how this will be used to inform next steps) and will not be used, and a clear explanation and commitment for how it won't be used for predictive analytics.• A much clearer explanation of the network effect research and whether or not these findings will be used as per the above.• A much clearer explanation as to how the results of this analysis can be controlled to avoid this work entrenching factors that could lead to young people being unfairly labelled, stigmatised or otherwise be the subject to interventions that cause harm rather than those consistent with a public health approach. <p><u><i>The committee therefore makes the following recommendation:</i></u></p> <p>Outcome C: The Committee advises approving the project with major amendments</p>
5 -	<p>Response – Results</p> <p>The Chair mentioned that the committee decided upon Outcome E (meaning more information was requested from the Lab before it could advise the PCC and CC whether or not the project should proceed), and were concerned about officers' health records being used without consent (see relevant point below). DP delivered presentation on results and following points were noted:</p> <ul style="list-style-type: none">- Response time decreased since July last year with incidents dropping off from 6am in the morning.- Currently backlogs build up overnight and become evident in the mornings/shift change.- If there was a 30% increase in priority 1 incidents these would lead to far more backlogs throughout the day.- With current resources if the percentage of double crews increases above current levels, median response time will increase.- Should demand increase then this can be more easily met with a higher proportion of single crews.- The costs of more single crews include higher risk to officers getting injuries and the cost of more patrol cars, therefore overall response times could be improved with a higher percentage of single crews but would come at a cost. <p><u><i>The Committee had the following questions:</i></u></p> <ul style="list-style-type: none">- Did you only look at days off or level of injury? DP noted that only days off were considered due to the available data.- How are you actually considering effectiveness of the call out? DP noted that would be another report. CT noted this would be hugely complex



	<p>and would involve a high number of data sets to consider and would have to form a separate project</p> <ul style="list-style-type: none">- Any consideration of the type of crime police are responding to? CT noted that it would cover too much of a broad range. <p><u>The following general comments were made by the committee:</u></p> <p>Again, the Committee appreciates the important resources-related issues connected to this work, and the important task of balancing the need to meet public demand on the policing service with cost constraints and the priority of officer safety. The Lab is to be commended for its work in finding alternative sets of data to use to build their models for this project, meaning that the Committee's previous concerns about intrusion into officers' medical records, in effect, is no longer an issue.</p> <p>The Committee however advises that while the use of the results of the Response analysis should go ahead, a further clearly-written paper is produced in a manner suitable to inform members of the public and WMP officers about the findings of the project and the way that they will be put to use.</p> <p><u>The committee therefore makes the following recommendation:</u></p> <p>Outcome B: Committee advises approving the project with minor amendments</p>
6 -	<p>Disproportionality – Results</p> <p>DP delivered presentation on results and following points were noted:</p> <ul style="list-style-type: none">- Investigate presence of disproportionality within certain datasets of WMP.- This report is purely for exploratory purposes.- This would be the basis to conduct further investigation and would be looking to provide more opportunities to address disproportionality in policing and ensure fair treatment.- Average age for stop & search is 17 and most likely to be black. Stop & search are more likely to take place in city centre and at Birmingham Airport. <p><u>The Committee had the following questions:</u></p> <ul style="list-style-type: none">- Why is there no analysis on mixed race? CT noted that the system is old and does not have a category for this.- How reliable is the database on use of force? How subjective? ST noted that the use of force data is subjective, a lot of data has been lost due to the recording tape cutting acts. CT noted that limitations of data actually helps focus them looking at work more they want to understand where they might be acting disproportionately, this is important to look more closely at for example stop & search. <p><u>The following general comments were made by the committee:</u></p> <p>The Committee had concerns over the validity of using 'use of force' data due to elements of greater subjectivity in the way that the relevant source data is recorded. The Committee was also concerned to learn that unlike in other data</p>



	<p>sets related to this project, mixed race people are not included in the ‘crimes’ data set. A whole section of the community, and of individual definition, is therefore not included. However, the Committee understands that WMP can only work with the data held, and was pleased to hear this issue is being remedied.</p> <p>The Committee however advises that while the use of the results of the Disproportionality analysis should go ahead, a further clearly-written paper is produced in a manner suitable to inform members of the public and WMP officers about the findings of the project and the way that they will be put to use, and in relation to the following points:</p> <ul style="list-style-type: none"> • How are the results impacting on existing projects i.e. will existing projects need to be reassessed or implemented with different datasets? • Proposals on the next steps of qualitative research into the trends identified, or otherwise research that will shed light on the issues identified. • A clearer and shorter outline of what this report is actually suggesting/finding – it is not that clear. • A communication strategy for how these findings will be presented to the public, or for how responses will be given to challenging queries or public concerns, to ensure the positive agenda of this research is clear. <p><u><i>The committee therefore makes the following recommendation:</i></u></p> <p>Outcome C: The Committee advises approving the project with major amendments.</p>
<p>7 -</p>	<p>Meeting took a short break</p>
<p>8 -</p>	<p>Update on IOM model</p> <p>The Chair explains that the model was to come back to the committee. DP delivered presentation on results and following points were noted:</p> <ul style="list-style-type: none"> - Model does now not include any stop and search related features. - The accuracy measures similar to the original build. - Model looks at people for more serious offences reduced from considering over 400,000 to around 190,000. - Offender management undertake risk based assessments as it is, they would use the output dashboard and use it for helping assess who may be subject to offender management interventions – looking at how it could be used in a beta testing stage – some local offender management units to proceed and will involve the model creating outputs and then seeing if the team would use it, and explore predictions. - People will be obliged to use the dashboard project. <p><u><i>The Committee had the following questions:</i></u></p> <ul style="list-style-type: none"> - To what extent will there be public transparency about what this model does and how it will be used? CT explained that, working with the PCC’s Office which has commissioned a grassroots social enterprise,



they have started to engage with the community through some focus groups to gauge a diverse range of views on the offender management model proposal..

- How can we look at whether or not officers will completely disregard or over rely on the dashboard? DP noted that the lab and senior officers will carry out focus groups, questionnaires, and 1:1 interviews to help understand how this model can be used in practice to inform decisions rather than replace professional discretion.
- How exactly will the accuracy of the model be assessed? In any piloting stage, will there not be a complication caused by an intervention following a prediction that makes it impossible to know what would have happened without the intervention?

The following general comments were made by the committee:

The Committee commends the efforts of the Lab and WMP more broadly in applying to the project the requirements of standards on the Management of Police Information (MOPI) and the Rehabilitation of Offenders Act 1974. The Committee was pleased to see that this reduced the number of people whose data fed into the model from c.450,000 to less than 200,000 people in the West Midlands area.

The Committee is concerned about the extent to which independent and qualitative research will be undertaken to assess how the model will be used in practice and to demonstrate how this will actually add value to policing and offender management practice. Equally, the Committee expressed concerns about how the accuracy of the model will be evaluated.

The Committee however advises that while the use of the results of the latest phase of the IOM tool project should progress, a further clearly-written paper is produced in a manner suitable to inform members of the public and WMP officers about the findings of the project to date will be trialled, and on the following particular points:

- The extent of the public consultation over the nature of the tool. The methods and results of a pilot phase in two areas of the West Midlands.
- A much clearer explanation as to how the results of this analysis can be controlled to avoid this work entrenching factors that could lead to people being unfairly labelled or treated.
- A much clearer explanation of the interventions (including restating assurances and safeguards over the non-coercive or punitive nature of the interventions – this could be in the form of a policy stipulating red lines for interventions) and the operational decision-making process that the IOM will link into in order to decide on those interventions.
- A clearer description of the qualitative analysis to be undertaken of how the model will be used during the pilot stage, including how the analysis will provide assurance that the model adds value and provides a credible improvement to current offender management practice.



- A much clearer expression of the choice of and impact of different errors rates for individual predictions of high harm offending.

The committee therefore makes the following recommendation:

Outcome C: The Committee advises approving the project with major amendments