

<b>Institution:</b>	University of Birmingham
<b>Unit of Assessment:</b>	Psychology, Psychiatry and Neuroscience
<p><b>Title of case study:</b> 5: Sex offenders: Ensuring public safety and improving the effectiveness of treatment through the development of an algorithm to match sex offenders to appropriate probation-based treatment.</p>	
<p><b>1. Summary of the impact</b> (indicative maximum 100 words)</p> <p>Through better assessment of the risk of reoffending it has been possible to improve the treatment of sex offenders and protect the public. <b>An algorithm developed at the University of Birmingham, has been used by the Probation Service to classify the entire prison population of over 8000 sex offenders attending treatment in England and Wales</b>, enabling allocation to the best treatment available at the time. This approach to treatment led to a <b>40% reduction in recidivism</b> in those who were treatment responders. More specifically, this work enabled length of treatment to be matched to high-risk offenders' level of pre-treatment risk/need, and resulted in a reduced rate of reconviction among high-risk offenders to the level of reconviction observed among lower risk/need offenders. The work has <b>reduced the level of sexual victimisation in the UK, reduced the costs associated with such offending, and has influenced policy and services for the treatment of sex offenders in other countries in Europe</b>. Such recidivism reduction also enables ex-offenders to lead more fulfilling offence free lives.</p>	
<p><b>2. Underpinning research</b> (indicative maximum 500 words)</p> <p>Professor Beech (Professor of Criminal Psychology, at UoB from 1998 onwards) has been heavily involved in developing systems for the assessment and treatment of sexual offenders for the Home Office, Ministry of Justice, and the National Offender management Service (NOMS), and his research includes:</p> <p><b>Research on improved assessment of offender risk.</b> The work originates in reports commissioned by the UK Government and written in 1999 and 2005, which examined how to improve assessment and treatment outcomes for sexual offenders [1]. Key conclusions relevant for the impact described here were that offenders varied in their response to treatment, and that if this variation could be predicted then treatment programmes could be tailored to individual need and responsiveness.</p> <p><b>Research on improved assessment of treatment outcomes for different kinds of offender.</b> As part of a national evaluation of all sex offenders undertaking probation-based treatment, all individuals volunteering for treatment completed a number of psychometric tests developed by Beech and other researchers [2]. This work involved offenders being classified as having a high or low need for treatment, and to assessment of any changes during treatment. Work looking at this typological analysis (reported in [2]) has been reported over a period of 10 years in high impact forensic journals (e.g., [3, 4, 5]).</p> <p><b>Research on an algorithm that combines typological information into recommendations for treatment and custodial term.</b> Although the work described above established the usefulness of psychometric typologies for predicting treatment outcome, all of the work of scoring psychometrics and formulating typologies was initially carried out on a manual basis. Mathematically weighted outcomes from these results were combined to give a recommendation for treatment. This was both time-consuming, and required statistical knowledge and confidence with using information technology. Implementing this process led to a heavy workload for individuals working for the Probation Service who carried out these assessments, plus a need for training in the necessary mathematical competencies. These requirements reduced the likelihood of practical uptake of these methods, and the challenges of accurately scoring and collating complex data raised the risk of miscategorisation of individuals.</p> <p>To address this problem Beech was a key contributor to the development of an algorithm that enables</p>	

scoring and data collation to be conducted in a largely automated fashion. Beech led this initiative, by developing the original algorithm, and (with colleagues, for the Probation Service) trained practitioners in how to use it. The Sex Offender Psychometric Scoring System (SOPSSys) was published in a practitioner publication: *The Probation Journal* (a journal aimed at probation officers, and managers) [6]. The algorithm automates all of the time-consuming and mathematically demanding steps described above, so that the user of the system only needs to enter the basic scores from the psychometric tests, which are then combined automatically to give a treatment recommendation. The ability to implement this in a clear, non-confusing and non-intimidating fashion was critical for uptake of the psychometric classification system.

The critical contribution of the algorithm is that it is accurate and efficient so that a typological approach to therapeutic allocation (i.e., identifying high/low need offenders) can be practically implemented in the work of NOMS. Therefore, this work has had very real world impact upon the treatment of sexual offenders.

**3. References to the research** (indicative maximum of six references)

1. Beech, A.R., Fisher, D & Beckett, R.C., 1999). *An Evaluation of the Prison Sex Offender Treatment Programme. U.K. Home Office Occasional Report*. Available at <http://webarchive.nationalarchives.gov.uk/20110218135832/http://rds.homeoffice.gov.uk/rds/pdfs/occ-step3.pdf>
2. Mandeville-Norden, R., & Beech, A.R. (2009). Development of a psychometric typology of child molesters: Implications for treatment. *Journal of Interpersonal Violence*, 24, 307-325. DOI 10.1177/0886260508316479
3. Beech, A.R., Mandeville-Norden, R., & Goodwill, A.M. (2012). Comparing recidivism rates of treatment responders/non-responders in a sample of 413 child molesters who had completed community-based sex offender treatment in the UK. *International Journal of Offender Therapy and Comparative Criminology*, 56, 29-49. doi: 10.1177/0306624X10387811
4. Wakeling, H., Freemantle, N., Beech, A.R., & Elliott, I. A. (2011). Identifying predictors of recidivism in a large sample of UK sexual offenders: A prognostic model. *Psychological Services*, 8, 307-318. (American Psychological Association Journal). In REF2.
5. Wakeling, H., Beech, A.R., & Freemantle, N. (2013). Investigating treatment change and its relationship to recidivism in a sample of 3773 sex offenders in the UK. *Psychology, Crime and Law*, 19, 233-252. DOI 10.1080/1068316X.2011.626413
6. Mandeville-Norden, R., Beech, A., & Middleton, D. (2006). The development of the Sex Offender Psychometric Scoring System (SOPSSys) for use in the Probation Service. *Probation Journal*, 53, 89-94. DOI: 10.1177/0264550506060870

**4. Details of the impact** (indicative maximum 750 words)

**Changes to national policy towards the treatment of sexual offenders in the UK**

This work has produced changes in policy over the last eight years in the Probation Service in the UK, and elsewhere, as follows:

**England and Wales.** Since the publication of the Sex Offender Psychometric Scoring System (SOPSSys) algorithm developed by Beech and colleagues (e.g., Mandeville-Norden, Beech, & Middleton, 2006) the Probation Service in the UK has used the SOPSSys system to allocate its entire population of relevant sex offenders (8,000+ individuals) to longer and shorter offender treatment. Its use is now standard practice across the 35 probation trusts across England and Wales. The benefits of these processes are to allocate individuals to treatment, dependent upon their needs; and to measure whether treatment has had an impact – in order to ascertain whether more interventions are needed for particular individuals [1].

**Scotland.** The work described in Section 2 has led to the development of new systems, led by Beech, for assessing the treatment efficacy of a new sex offender treatment programme in Scotland to commence in 2014. This has led to the production of a manual - 'The Offender Rating Battery for Sexual Offenders' - that will be used to guide the application of this new system across Scotland.

**Reductions in repeat offending**

Barnett, Wakeling, Mandeville-Norden and Rakestrow, (2012), [2] used the SOPSSys data to examine its relationship with sexual and/or violent reconviction in a sample of 3,402 convicted sexual offenders

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who attended probation treatment. They found that problematic areas (risk domains) that were dysfunctional before treatment, as measured by the SOPSSys system, predicted recidivism outcome. These findings suggest that more intensive treatment should be offered to those with the highest levels of psychological problems. Barnett, Wakeling, Mandeville-Norden and Rakestrow (2013) [3], using the same sample, examined the relationship between psychometric test change over treatment and sexual or violent reconviction. Those who were classed as not requiring further change in a major aspect of their problems reliably linked to re-offending had a 25% lower rate of reconviction than those who still needed to change. This demonstrates the efficacy of treatment, which is critically enabled and targeted by the efficient psychometric approach of the SOPSSys system.

**Reduction in costs to the criminal justice system**

The SOPSSys enables those in probation services to score offender assessments on entry to their system in order to classify offenders by the level of risk posed and to determine the treatment needs of the offender. Subsequently offenders can be allocated to the correct length, intensity and type of treatment, reducing the risk of sexual recidivism from approximately 19% to approximately 11% [4]. The initial cost to the criminal justice system per re-offence has been estimated at £108,261 per offender [5] (this includes Criminal Justice cost, Crown Court cost, provision of a new prison place, and cost of Sex Offender Treatment Programme). There is currently a population of approximately 300 sexual offenders in the community in the UK who were initially categorised as at high risk of re-offending. With a recidivism rate of approximately 19% if offenders do not receive appropriate treatment, this cohort would be expected to incur £6.2M costs simply for processing their re-offence, whereas with a reduced rate of recidivism this cost would be £3.6M. Moreover, costs not only follow from processing the re-offence, but also from the resulting prison term. Such savings are substantial given that the annual cost of a prison place is £40k, and that an offender convicted of rape will serve a custodial sentence of, on average 8.5 years, and across other sexual offences an average of 32 months (Ministry of Justice, Home Office and Office of National Statistics, 2013). Of course, in addition to these monetary savings, reduced recidivism also has substantial benefits for potential victims, for well-being of offenders, their families and the society into which they are released.

**Influence on international policy and practice**

The work outlined above has influenced the development in Latvia of a system to assess pre-treatment need and effectiveness of treatment for a new sex offender treatment program. This assessment has been incorporated in the project entitled through the "Development of Supervision and Treatment System of Sex Offenders in Latvia" -Project No.LV0068, the initial phases of which were completed in April 2011. Probation, prison, mental health, victim support, prosecutor's office, courts, and local government) were all involved in this project. An important part of the project involved Professor Beech running workshops to train prison and probation staff in the use of the psychometric assessments (including the SOPSSys), in order to establish an effective evaluation framework Assessing efficacy of sex offenders' treatment programs [6].

Prof. Beech and colleagues have been heavily involved in training frontline practitioners and researchers to use the SOPSSys, in other countries including Slovakia, New Zealand, Australia, and Taiwan. Training workshops/keynotes on these topics over the last few years include:

- Best practice in sex offender treatment. The Max Plank Institute for Foreign and International Criminal Law/ National Institute of Criminology, Budapest. Freiburg Germany 16th -17th May, 2013.
- The understanding and treatment of sexual offenders in the 21st century. Utrecht, Holland Conference. April 25th 2012.
- Risk assessment for sex offenders. Department of Social Development, College of Community and Human Services, Rikkyo University, Tokyo, 2nd August 2011.
- The way forward for sex offender treatment. Fourth Krakow Conference of Psychology and Law, Krakow, Poland, 4-5th June 2011.
- New directions in risk assessment and treatment for sexual offenders. Third International Conference on Drugs and Violence, Hsuan Chuang University, Hsinchu, Taiwan. 10th June 2010. This conference was open to practitioners working in the field of sexual abuse (such as psychiatrists, psychologists, social workers, probation officers, and lawyers).

**International recognition and influence.**

Anthony Beech was awarded the Significant Achievement award from the Association for the

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Treatment of Sexual Abusers (ATSA). Dallas, Texas, September 2009. ATSA is a North American organization with a membership of around 3000 people, and this prize has only been awarded to individuals outside of the US once in the last 20 years. He has also been awarded the Senior Award for a significant lifetime contribution to Forensic Psychology in the UK. Division of Forensic Psychology, British Psychological Society, June 2009, again for this work. In 2012, Anthony Beech has been elected as the ATSA research chair, and a member of the ATSA board. This position has never been filled by an individual who resides outside of North America. The ATSA board see this appointment, in part as reaching out to other countries to influence, and be influenced by approaches to the assessment and treatment of offenders as developed by Anthony Beech. Hence, this appointment is indicative of the influence Anthony Beech has had in the area, in terms of policy and practical influence of academic research.

**5. Sources to corroborate the impact** (indicative maximum of 10 references)

1. Beech, A.R., Mandeville-Norden, R., & Goodwill, A.M. (2012). Comparing recidivism rates of treatment responders/non-responders in a sample of 413 child molesters who had completed community-based sex offender treatment in the UK. *International Journal of Offender Therapy and Comparative Criminology*, 56, 29-49. DOI 10.1177/0306624X10387811
2. Barnett, G.D., Wakeling, H., Mandeville-Norden, R., & Rakestrow, J. (2012). How useful are psychometric scores in predicting recidivism for treated offenders? *International Journal of Offender Therapy and Comparative Criminology*, 56, 420-446. DOI 10.1177/0306624X11403125
3. Barnett, G.D., Wakeling, H., Mandeville-Norden, R., & Rakestrow, J. (2013). Does change in psychometric scores tell us anything about risk of reconviction in sexual offenders? *Psychology, Crime and Law*, 19, 85-110.
4. Hanson, R.K., Bourgon, G., Helmus, L., & Hodgson, S. (2009). The principles of effective correctional treatment also apply to sexual offenders: A meta-analysis. *Criminal Justice and Behavior*, 36, 865-891. doi: 10.1177/0093854809338545
5. Elliott, I.A., & Beech, A.R. (2012). A U.K. cost-benefit analysis for Circles of Support and Accountability. *Sexual Abuse: A Journal of Research and Treatment*, 20, 1-19.
6. [Development of Supervision and Treatment System of Sex Offenders in Latvia” -Project No.LV0068](#) This evidences use of SOPSSys for this programme.