The Quantification of Fear through Prison Population Projections

Dr Sarah Armstrong, Senior Research Fellow, Scottish Centre for Crime and Justice Research, University of Glasgow, Ivy Lodge, 63 Gibson Street, Glasgow G12 8LR
+44 (0)141 330 8257
sarah.armstrong@glasgow.ac.uk

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Abstract: This article examines projections, or statistical forecasts, of prison populations from a social perspective, treating them as social actors in their own right. Linear regression – the almost universal foundation of prison population projections – is in simple terms the act of drawing a straight line through the data at an angle which best ‘fits’ the observed data, that is, what has already happened. In this way, population projections work as a narrative device, finding order, patterns and normality to tell a story of growth or decline. A hidden feature of this technology of knowing the future is the imposition of narrative coherence on the past. However, a review of the past projections reveals their own inherent instability, volatility and chronic inaccuracy. The paper suggests that the accuracy of prison population projections is less important than their power to create a sense of control and legitimacy to penal policy makers. The paper concludes by characterising forecasts as an act of imagination and argues for counter-discourses and imaginaries that might balance the power of the numbers.

Keywords: prison populations, prison projections, statistics, penal imaginary, social studies of statistics
Introduction

Outside my office, a police helicopter hovers, and several police vans have surrounded a building just up the hill. Local cops have joined with university security staff to evict the students who are occupying it. The occupation is most immediately over the future use of what until now had been a graduate students' club but is more generally and fundamentally about a proposed re-structuring of the university in which several modern languages, anthropology, adult education courses and the whole nursing school were at risk of being re-organised out of existence (http://www.bbc.co.uk/news/uk-scotland-glasgow-west-12819114). The university's proposal for such significant cuts was made on the basis of a statistical projection, the topic of this paper. In the university’s story, it is projected that in five years there will be a budget shortfall of £35 million, and so we can no longer afford to teach in areas that are not generating income. This statistical forecast has led to new communities forming (an active email list across subjects for circulating information with updates on the cuts and the grad club occupation), organisational contraction and expansion (union membership has surged, I myself joined my union while too distracted by helicopter noise to work on this article) and, as of today, physical coercion. Who knew statistics could be such bullies, activists and organisers?

The projections serving as the basis of this paper are of prison populations, and as with university budget forecasts, I am interested in their role as social actors. Prisons represent a major undertaking for government: they are expensive to build, even more expensive to run and last a very long time. Forecasts of the prison population are used to improve the efficiency of decisions about investing in these expensive entities. However, despite their crucial role in determining whether and how many prisons get built, prison projections have a low public profile. Questions about their accuracy and assumptions have never featured in penal policy debate. The last UK government, for example, proposed constructing three prisons of such unprecedented size they were called 'Titans’ relying on a projection that the prison population in England and Wales would reach 100,000 by 2017. The billion pound Titan programme has been abandoned, but the projections on which they were based were not; in slightly revised form they continued to support the last Government’s efforts to expand penal capacity in other ways (http://news.bbc.co.uk/1/hi/8015999.stm).

The focus here on the social life of prison statistics offers a chance to explore the idea that numbers about criminal justice – numbers in prison, rates of crime, costs of more police on the streets, the list is endless – do more than describe a corner of the universe, but at the same time create and value its inhabitants. By considering the numbers themselves as social actors, it becomes possible to glimpse statistics behaving like the cops and robbers they quantify, occasionally dissembling, manipulating and evading capture. After explaining in a bit more detail what I mean by the social life of statistics the analysis proceeds in three parts. First, I show how probabilistic statistical techniques, commonly used to project prison populations, do not merely represent likely patterns of change, but themselves constitute a particular narrative about prison expansion. Second, I look at the typical assumptions underlying explanations of change in prison projections.
These assumptions premise penal expansion on the internal dynamic of criminal justice policy and behaviour, creating an impossible modelling challenge. How does one predict, statistically, what judges and legislators will do five or ten years hence? The thread running through the piece is that methods of description and tools of analysis participate in the creation of the phenomenon they are being used to ‘see’. In the final section, I develop this claim to argue that statistical analysis, as considered in the case of prison forecasting, is only one way of imagining the future, but it is a totalizing narrative that renders pathological – unscientific, partisan and prescriptive – other ways of thinking about change.

The Social Life of Statistics

Hacking’s (1990) field defining work on the science of probability linked its rise to, among other things, a changing world view about the power of people to control their lives. In his account, the invention of probability theory transformed the future from an unknowable pre-determined fate into a world of possibilities that could be calculated and manipulated to advantage. A unifying theme running through social histories of statistics is that the growing importance of quantification as a way of understanding the world was based on the modern conviction that one ‘need[s] to know a nation in order to govern it’, and connected to this, that knowing a thing requires unearthing its underlying order, an order which quantitative techniques are uniquely well placed to discern (Desrosieres 1998: 16). Appadurai (1996: 117) hit upon this fundamental theme of control in arguing that quantification was a strategy to assist Britain’s colonial project in India: ‘numbers gradually became part of the illusion of bureaucratic control and a key to a colonial imaginary in which countable abstractions, of people and resources at every imaginable level and for every conceivable purpose, created the sense of a controllable indigenous reality.’

Recent work has focused on the active role played by statistics in social life, arguing that they do not merely discern order, but also construct it. The conventional ‘notion that statistics are simple, straightforward, objective descriptions of society, gathered from nonparticipant points of observation’ obscures the fact that ‘society and the statistics that measure and describe it are mutually constructed’, that the act of counting changes ‘the objects being counted’ (Rudinow Saetnam et al. 2009: 1.). Mork Lommell (2009) offers a detailed example of this: she noticed how changes in the way crime numbers were presented in Norwegian police annual reports over 50 years reflected and facilitated changing meanings about crime itself – from a natural phenomenon to evidence of professional competence. That is, where the incidence of crime was once treated as largely outside of state control – earlier reports noted the good fortune of seeing a low rate of property crime in some years – by the change of the millennium, crime was used as a direct index of police performance – police deployment and operational choices are now routinely cited as evidence of success in lowering rates of crime. Statistics had evolved from measuring the extent of a problem to establishing the power of the state over it.
The social behaviour of numbers remains a fringe interest in the social sciences where students are encouraged to look for the stories behind the statistics, which implies that the mundane techniques of quantifying social life hide and downplay rather than display and foment its dramas. Star (1999) warned against ignoring the boring, however: ‘Study an information system and neglect its standards, wires and settings, and you miss equally essential aspects of aesthetics, justice and change’ (p. 379). Latour (2007) takes the argument one step further: in his radical account there is no difference between social life and the technology that enables it, there is no backstage to the theatre of life. Perhaps it is in the spirit of such claims that there are calls for greater attention to the study of processes rather than content in criminal justice policy (Jones and Newburn, 2006) so that we can understand how the ways we have come to adopt particular forms of punishment or crime control are critical to their legitimacy and meaning. The boring parts of social life might well be the best place to observe how everyday practices and technologies interact with, shape and are shaped by dominant political discourses. Such is the claim of those calling for more ‘anthropologies of policy’ (Shore and Wright, 199; Strathern, 2000; Yanow, 1997) noting the importance but relative neglect of the mundane settings where the political comes into contact with the operational, and the ideological becomes the habitual.

**The Stories Statistics Tell**

Forecasting models take a series of discrete events – whether these are prison populations, hurricanes or cancer cases – and aggregate them, creating a beast made up of these individual parts but displaying its own characteristics and behaviour. What makes it grow or shrink? How does it behave from year to year? Linear regression, the basis of many forecasting models and under consideration here, is the mathematical articulation of these questions. In linear regression a neat line is drawn through a scatter of dots marking observed individual experiences in order to reveal the underlying pattern or trend of the phenomenon as a whole. A variety of techniques are available to figure out where the line should go. The least squares approach is commonly used, which involves finding the route through the dots that minimises the distance between the aggregating line and any individual dot.¹

For prison populations in the UK and US over the past fifteen to twenty years, drawing the line could be done by eye without recourse to fancy statistical techniques – the dots have formed such a self-evident pattern going from the bottom left of the past to the upper right of the present. Figure 1 plots Scotland’s average daily prison population on a yearly basis from 2000-01 to 2009-10 (which follows the pattern for the wider UK and US)²:

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¹This is obviously a very simplified, though it is hoped not reductive, description of minimising standard error (in a least squares approach one plots the line by selecting the value that shows the least error, or minimum difference, between an observed – actual – data point and a predicted one).

²Scotland and England and Wales produce official prison projections. In the United States, there are no officially produced national projections. Some states, and cities and counties. make their own projections, though these are not generally released as official forecasts, and may not be regularly produced. Private organisations are not infrequently contracted to produce one-off projections for state and local jurisdictions (e.g. http://www.jfa-associates.com/services/forecasting.html).
And here is the prison population for Scotland projected through 2018, shown below in Figure 2 (again, projections for the UK and US look similar, though on a bigger scale)\textsuperscript{3}:

\textbf{Figure 2 Prison Population Projections for Scotland, 2008-09 to 2017-18}

The future apparently is going to be much like the past, with the line moving up towards the right telling an unhappy but also unsurprising story: prison populations are going to rise, and rise steadily into the medium term future. Just as with offenders, whose past involvement with the criminal justice system is the single most influential predictor of their future involvement, the past seems to be the main driver of the prison system’s future.

\textsuperscript{3}The scales of the two figures are identical, i.e. with units scaled to 500, and so the rate of growth can be visually compared. The trend line is automatically generated by the chart making software (MS Excel).
A gently sloping straight line does not make for a very exciting story, but it is precisely this bland trajectory which is the quintessence of the statistical narrative. As a storytelling technique linear regression exerts a moderating force that insists upon an underlying trend in the progress of penal expansion. It regards spikes and dips in the data as imperfect indicators of where the true path lies; 'regressing the line to the mean' is an attempt to pull these wayward dots back into line, to show if they had been normal where they would have been. It is a process for turning forests into timber farms, bipolar highs and lows into mellow middles, exerting human order on natural chaos (Scott, 1998). Thus linear regression adopts a narrative strategy which employs precisely the opposite approach of tabloid newspaper headlines: the latter take isolated and extreme examples of crime and try to convince that these are normal, typical events that we need to guard against on a daily basis. Forecasting based on linear regression looks back on the past, finds the most typically normal events in it, and calmly extends these along a line into the future.

The power of this narrative is its objectivity and reasonability. It's hard to disagree with a straight line. The trend line, even if it were not obvious to the eye, is generated automatically, in this case by Microsoft Excel’s easy to use chart making wizard, thus sealing off the calculation from human bias. The implicit basis of authority embedded in this narrative is that it is a story based on actual events not theories or guesses. The model takes only what actually has happened – historical data points – to generate the story of what is most likely to happen next. Past facts are then linked to future likelihood by a simple but powerful claim that there is a normal rate of growth to be discovered; that is, linear regression assumes an underlying regularity in the life of the thing being forecast. Here it is assumed that prison populations want to move in a certain way and the aim of refining the regression model is to discover the underlying trend, to find through mathematical refinements, the true path of the data. Moreover, the accuracy of the model, the degree to which the story (trendline) fits the data can be carefully measured through such impressive sounding diagnostics as R-squared, t-tests and F tests, which offer further reassurance against subjective human bias.

The persuasive power of linear regression is in fact twofold, relying on making things obvious while also making things highly technical and therefore difficult to contest. The transformation of social activity into a straight line gets across even to the technically or temporally challenged the gist of the numerical analysis. The lines in Figures 1 and 2 are so simple, and the relationship between them so obvious, we are intimidated out of arguing ‘against the numbers’. Who could look at Figure 1 and plausibly argue that Figure 2 could be any different? Intuitively and mathematically, Figure 2 must follow from Figure 1.

These figures present prison population data in the form of how many people are or will be in prison at a given time, in this case the ‘average daily population’ (ADP). ADP is a measure of population stock, a calculation of how many people are using up prison space on a typical day. Another way of assessing prison populations is to measure rates of flow,
or the volume of turnover through prison, for example by counting how many are admitted each year.\footnote{In Scotland and England and Wales, admissions are referred to as receptions. ‘Receptions’ are not the same as people but are treated as a proxy for them: ‘Prison receptions provide a useful indication of flows through the prison service but are not equivalent to persons received. If a person enters prison on remand or having been sentenced by one court, this is counted as one reception. Where a person receives a custodial sentence after a period on remand or while serving another custodial sentence, this constitutes a further reception….’ (Scottish Government, 2010).}

The projection models used both in Scotland and in England and Wales (as well as in comparable work in the US, see Martinez, 2008 and Pew Charitable Trust, 2007), are generated mainly using measures of flow. Figures 3 and 4 present flow data alongside the data on prison stock. Unlike the pattern of steady growth seen in Figure 1 where just the measure of stock is displayed, the numbers on prison receptions depict both rises and falls: receptions to prison in Scotland rose between 2000-01 and 2002-03, but then fell for two years before rising back up in 2007-08. Since then, however, numbers on prison flow show falling admissions to prison. Stock and flow numbers are rarely presented together, and by overlaying them we see we have now got two stories, and they seem to be saying different things: one a tale of steady growth, the other of growth and decline. The picture in England and Wales, shown in Figure 4, shows an even starker difference between the stories of constant stock and variable flow.\footnote{England and Wales measures stock and flow slightly differently than Scotland. Rather than an average daily population, a one day count (on 30 June each year) is used to compare prison stock across years; and where Scottish receptions may include multiple receptions of the same person, the England and Wales numbers count only the first reception of a prisoner during the year.}

![Figure 3 Average Daily Population and Annual Receptions in Scottish Prisons, 2000-01 to 2009-10](image)

Stock and flow data, by definition, measure two different things, but together they are used to understand the future development of prison populations. Presented here, their differing trajectories begin to upset the visual stability of the story told through linear regression. The two figures show that when more people went to prison, the prison population rose gradually; when fewer people went to prison, the prison population rose gradually; when many fewer people went to prison, the prison population rose gradually. This raises questions about the defining assumptions of linear regression—that the past is the best predictor of the future, and the past is best understood as a flat line.

Testing the statistical account of prison growth is straightforward and involves a simple comparison between a projected population and the actual population for the same year. Figure 5 presents this data, comparing the actual prison population of England and Wales in 2001 to the Home Office's forecasts of the 2001 prison population made between 1993 and 2000.6

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6 During this period a number of different methodological adaptations were made, though again the foundation for all of them was linear regression.
Figure 5  Comparison of the Actual and Projected 2001 Prison Population in England and Wales by Year of Projection

If the accuracy of these projections is our gauge, then the past, as viewed through the lens of statistical analysis, has been a poor guide to the future. The projections between 1996 and 1998 differed by almost 20,000 prison places, or nearly one-third of the total actual population in 2001. The only pattern apparent in Figure 5 is that the further away one is from the date being projected the less accurate the projection is likely to be, which questions the point of doing them in the first place. Moreover there is no other obvious pattern to the inaccuracy; future prison populations look like a realm of 'unknown unknowns'. The implications of this for policy makers, and taxpayers, is significant. The capacity that the projections suggested was needed in 1998 was 8,000 more than actually came to be used. If this capacity had actually been built, the cost of these unneeded prison cells would have run into the hundreds of millions. Prison projections for other periods have proven to be equally disappointing: projections made in 2002, estimated the prison population in England and Wales would be between 91,000 and 110,000 in 2009 (Home Office, 2002). The actual population in 2009 was just over 80,000 (Ministry of Justice, 2010).

Accuracy may not be the most important role of prison population forecasts, however. In telling a story about the future we are invited to see narrative coherence in the past, showing a prison population that has grown at an average pace year by year. Through its connection of past and future by a simple line a recent history of spectacular penal excess and legislative volatility has been re-imagined as an experience of gradually and steadily rising prison populations. In this process the statistical analysis imposes rather than elucidates meaning. And, by framing the problem in a particular way, places itself outside of the picture, hiding the fact that the method of analysis also is part of its argument.

Explaining Statistical Stories

Drawing the line into the future requires statisticians to make some assumptions, which are generated by reflecting subjectively on possible explanations for past growth or decline and then objectively testing the validity of these as factors of future change. Perhaps the most surprising assumption made about the drivers of prison growth, for the layperson if not the criminologist, is that crime does not figure at all. Although it might seem logical to assume that the amount of punishment in a society is directly related to the amount of crime it experiences, we know that nations mete out markedly different amounts of punishment at a level that cannot be explained by variations in crime alone (Bushway, 2011; Young, 1986; Downes and Hansen, 2006). In any case, the journey from crime to punishment is so circuitous and uncertain that it is nearly impossible to correlate the two. Instead of using crime as a variable in the analysis, statisticians focus instead on the circuitous and uncertain journey, emphasising in particular the last stop on the way to prison – sentencing:

'The reasons for the recent growth in the prison population are well known. The main factors influencing it were the custody rates at the courts, the average sentence lengths given and the number of cases passing through the courts.' p. 3 (Home Office, 1998)

Some version of the above statement can be found in the methodological section of nearly any prison population forecast. In addition to the numbers and lengths of sentences: 'Legislative and policy changes [that] have contributed to...making sentence lengths longer...' (MOJ 2009a) also drive growth in the prison population. Hence the projections have to take account not only of 'assumptions about future criminal justice trends (e.g. sentencing)' but also of 'the anticipated impacts of [relevant criminal justice] policy and process initiatives' (MOJ 2009b: 2). It turns out that judges and legislators, not robbers and rapists, are behind the unprecedented growth in prison populations in the UK and US (for America see Zimring, 2001).

While there is an endless amount of research, lots of it quantitative and some of this high quality, on the causes of crime, where are statisticians to turn for research on the causes of punishment, and specifically, the causes of judicial behaviour? What there is tends not to be in quantitative form, in other words, a form that can be worked into a statistical forecasting model. Instead one has to make an educated guess: 'It may not be possible to predict what the courts will do in future years but it is possible to make estimates of what would be the outcome if sentencing in the courts were to follow any of a number of alternatives' (Home Office 1998: 3). These alternatives almost invariably boil down to three scenarios to which different rates of growth are attached: (1) judges get tougher; (2) judges behave the same; (3) judges get more lenient. These scenarios are then applied to different types of prisoner, for example for remand prisoners, short term prisoners and long term prisoners. So a past rate of growth of, say, 3% for remand prisoners would get bumped up under Scenario 1. Estimates for different categories of prisoner are combined and a weighted average produced for the long term forecast of growth for the overall prison population. Typically, the middle range scenario is the figure generally quoted in the press and used as the guide in policy development. This is a natural consequence of
signing up to linear regression as the method of analysis, where extreme examples of past practice are reined in to the middle, or regressed to the mean.

Let us stand back and consider the overall process, taken from the records of England and Wales but reflecting the best practice also in the US or Scotland. A variable for which there is extensive and high quality numerical data – crime – cannot be used in the calculation, though in any case its ability to explain the behaviour of the dependent variable of prison populations is uncertain. The one variable – sentencing behaviour – that is uncontroversially and significantly correlated to the dependent variable lacks quantitative evidence and is nearly impossible to predict. Nevertheless, scenarios are imagined for the behaviour of the impossible variable, based on a past that has an empirically unknown but statistically assumed connection to the future, with the selection of the most likely scenario made on the basis that it envisions a future that deviates the least from the present.

The England and Wales planners of 1993 were concerned enough about this process that they devised an additional feature of their model that would tether their guessing to the empirical world. This involved taking demographic information into account, making use of 'reliable projections of the age and sex composition of the general population' to allow the prison estimate to reflect the fact, for instance, that the numbers of juveniles and young male adults – groups that historically have constituted large proportions of prison populations – had been falling in the general population since the mid 1980s (Home Office 1993: 3). The proportions of different age and sex groups in prison has shown considerable stability over time and so this offered a chance to install a check on any unusual predictions made in the forecast model: a projection that came up with prison growth based on higher than current rates of young men in prison might be suspect, for instance. Figure 5 above shows the resulting success of the 1993 prediction for 2001: it was the worst prediction of all those presented in Figure 5 by being nearly 15,000 prisoners fewer than the actual population. It was also the longest range prediction, but its methodology appears to have been repudiated implicitly when the following year's projection revised the estimate upwards by 5,000 and any mention of incorporating a demographic variable into the forecast model was henceforth quietly and permanently dropped (Home Office 1994 et seq.).

Subsequent modelling adjustments have continued in their efforts to pin down sentencing patterns and the influence of criminal justice policy and legislation. In 1998, the year the 2001 prediction was much higher than the actual figure, statisticians developed a 'flow model' in which 'substantial changes in courts' sentencing that had been observed prior to 1996' were analysed to come up with scenarios that correctly predicted the 1996 population level (Home Office, 1998: 3). In other words, recognising the direct and substantial causal link between judicial behaviour and prison population size, court activity prior to 1996 was studied to come up with retroactive explanations of sentencing practices that would result in a population the size of that observed. Two features of this modelling experiment are interesting. First, this model unplugs prison population change from the world 'out there' – the behaviour of criminals, changes in the general population – setting it firmly into the machine of justice itself, evoking the image of a closed system
that is both creating and 'serving' its own clientele (McAra, 2009). Second, its failure nevertheless as a predictive tool – coming in with an estimate that was 8,000 places off (Figure 5) just three years before 2001 – shows that despite treating judicial behaviour as significant for penal change, it remains an elusive variable.

Adjustments to the forecast model of prison populations for England and Wales took place nearly every year between 1995 and 2009, during which the system grew by 30,000 prisoners, the largest and the fastest rate of expansion yet experienced in UK prisons (Ministry of Justice 2009a). The forecasters of the 1990s did not see this avalanche coming, while the forecasters of the 2000s could not see beyond it. That is, projections made in the first half of the period consistently underestimated growth (Figure 5), while projections made in the second half of the period consistently overestimated it (Table 1). The pattern of under and over estimating shows that forecasting in this area has been like walking up a mountain backwards. The problem with this as a method of forecasting, or mountain climbing, is that looking backwards gives no warning of the peak. Statisticians looking backwards in the mid 2000s were still projecting huge rises in the prison population of England and Wales – hence leading to the proposal of the Titan prison building programme. They could not see that just up ahead, in 2008, was a change of government and a global financial crisis that meant the UK would begin, literally, to run out of money to finance penal expansion. By 2010, the UK Government was contemplating letting people out of prison earlier in their sentences and its Justice Secretary was questioning vociferously the value of prison for many of the people judges were sending to it. In Scotland meanwhile, a new government led by nationalists made reform of imprisonment one of its main targets after being elected in 2007 appointing an independent commission to find ways of reducing the unnecessary use of prison (Scottish Prisons Commission, 2008). And in the same year, the population in U.S. state prisons fell for the first time in 38 years, despite prison projections published by the respected Pew Charitable Trust in 2007 forecasting a substantial increase in the overall prison population of America through 2011 (Pew Center on the States, 2010; Pew Charitable Trust, 2007). However, rather than imagining themselves to be living through a period which would turn out to be unusual, a statistical anomaly, forecasts treated this era of mass imprisonment as the new normal.

<table>
<thead>
<tr>
<th>Year</th>
<th>Medium Scenario</th>
<th>Actual</th>
<th>%Difference</th>
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<td>83650</td>
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<tr>
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<td>86000</td>
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<tr>
<td>2010</td>
<td>87100</td>
<td>86000</td>
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NB: The 2005 medium scenario was calculated by averaging the high and low scenarios – atypically, the only two scenarios published in that year's projection.
Effect as Cause

Have recent events established we have arrived at the peak of penal expansion? The question itself reasserts the hegemony of statistics in describing and explaining penal change. Some mechanisms of this hegemony have already been discussed, that there is a narrative logic inhering in the rises and falls of national prison populations that can suggest its own next chapter. Another feature of the forecast model as narrative device is that it frames the prison population problem in linear causal terms where factor X explains changes in prison population Y.

A linear causal storyline treats the causes of prison populations as natural or epidemiological phenomena: that is, prisoners arise from some factor that can be identified, isolated, and presumably therefore, acted on. Like hurricanes or health care, changes in prison populations are the result of a combination of exogenous (pollution, ocean currents, crime) and endogenous factors (environmental policy, prison sentence lengths). These then can be targeted for reform. In order to explore the implications and effects of this problem construction, I would like to shift the focus here from what statistics does when it provides our lens into the future or how well it does it, to the original premise that the future is unknown. This moves us away from observing the social life of forecasting tools to a more basic issue about our need of them in the first place.

The chief statistician of the Swedish prison service reminds us why we make projections of prison populations: 'The main reason for making forecasts is to become equipped for the future and to make plans for the future. Will more or fewer prison places be needed?...Decision-makers should at least have basic information that shows the likely trend in prison populations [given the current] legislation in force.' (Danielsson, 2000: 3). Anticipating the risk of potential catastrophes allows us to prepare now either to avoid or survive disaster-filled futures. Even if there are costs to getting it wrong, the error is likely to be one of magnitude rather than direction. The projections supporting the Titans prison proposal were too high, but correctly showed the direction of travel of prison populations, enhancing the ability to plan for managing higher numbers.

Given such a reasonable case for risk assessment, on what basis is it possible to suggest that forecasting, a tool of risk assessment, is not just unreliable but unnecessary? When it misdirects our understanding about the causes of prison expansion. Figures 3 and 4 showed that oscillations in the number of people going to prison in the UK, no matter whether there were more or fewer each year, were accompanied by a population in prison that seemed to move only in one direction and at one speed – steadily upwards. Let us consider at this point two kinds of explanation for this, one set within the cultural sensibility of statistics and the other standing outside of this perspective. The statistically validated explanation for a rising prison population despite falling admissions, is that while fewer people may be going to prison each year, they are staying there for longer. This is easily verified by sentencing statistics: average time served and average sentence lengths have been rising steadily in the US and throughout the UK. Again, we have
evidence that judges, and whatever influences their sentencing decisions, are the key factor. The consequence should be new sentencing legislation and policy.

Now, stepping outside statistics, how else might we think about the sources of the gradual upward march of the prison population? One way to shake off the blanket of statistical explanation is to turn the causation question around a bit. Rather than coming up with explanations of the growth we did observe, what caused the growth we did not observe? Specifically, why haven't actual prison populations in England and Wales jumped up and down wildly in short periods of time, like the prison projections themselves, varying by thousands from one year to the next? For one thing, forecasted populations can be wiped away and reconstructed in a keystroke. Real prison populations must be housed in real prisons, which take years to get up and running. The levels of growth projected in the middle part of the 2000s would require, had these projected prisoners materialised as physical ones, a couple dozen more prisons on top of the record breaking growth of penal capacity that took place in this jurisdiction between 1997 and 2009. During this period, the prison system added nearly 25,000 prison places through new construction and doubling up in cells. It also freed up space, on the order of two to three thousand places per year, through the introduction of early release schemes like Home Detention Curfew (where prisoners are released early onto electronic tags) (Commission on English Prisons Today, 2009: 14; Ministry of Justice, 2008).

In sum, the increase in prison capacity almost perfectly matched the increase in prisoners over the past dozen years. Looking at the problem from this perspective highlights an obvious point: there can only be as many prisoners as there are places to put them. The growth we did not observe, that is the excess of the prison forecasts of the 2000s, was a result of the physical capacity and limits of the prison system. This suggests that we ought to be considering prisons themselves as drivers of prison populations. More prison capacity means more prisoners. When judges get tough and send more people to prison, unless new prisons are built the prison system is forced to create safety valves – house arrest, parole adjustments, early release, suspended sentences. When judges sentence fewer people to prison, the people already in prison get to stay longer. Whatever judges do, prison capacity acts as a limiting factor on the total population size. Outside of the forecasting model, a new explanations is possible: prisons cause prisoners.

The question then becomes – what causes prisons? Interrogating the issue this way removes the forced comparability of the prison problem to epidemiological phenomena as happens when we think of prisoners as the result of bad childhoods, harsh judges, failed community sentences and legislative reform. Prisons, as opposed to prisoners, are a creation wholly within the power of policy makers, the result of intentional, rational and planned investment of resources. Prisons are an explicit choice of the government while prisoners are a social problem for the government. Prison population projections here demonstrate their usefulness, which transcends accuracy. By focusing on volatile and minimally controllable causes of growth, forecasts allow policy makers to articulate their own role in penal growth as responsible and foresighted, a necessary reaction to rising

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7 It should also be noted that many prisons in England and Wales are operating above their intended capacity.
demand rather than the creation of demand through increased supply. In this field of
dystopic dreams, the suspicion among many prison scholars that 'If you build it, they will
come' has been reconfigured as a justification, 'They are coming, so we built it'. Forecasts
of surging prisoner numbers creates an imperative on governments to act, and thus
prisoners – who in the forecasts are an effect of judicial behaviour and other factors –
become the cause, the acceptable justification, of more prisons.

The penal expansion this has facilitated in the US and UK has given us a future of the
past. Prisons will far outlive the forecasts on which they were based, and their
inaccuracies are not easily undone or passed into oblivion. No matter what purpose
punishment may have in 50 or even a hundred years’ time, it will have been shaped and
constrained by the choice to invest today in thousands of buildings for holding large
groups of people in secure isolation. Stern (1998) is not alone in characterising this as a
'sin against the future'.

Conclusion
Statistical forecasts of prison populations are a way of telling stories about penal change.
And more than this, they tell us there is a story, that there is a predictable trajectory in our
punitivity. They also give us the reasons driving the arc of the story, and it is striking the
degree to which these reasons are attributed explicitly to the behaviour of the justice
system itself. But in fingering the cops rather than the robbers in its version of the tale,
prison population forecasts are obscuring equally significant 'persons of interest': prisons
and projections themselves. Standing in front of these suspects is one of the ways
projections act in the social world. Their obstruction is a form of action that supports
particular practices and lines of inquiry. One of these practices is continued
administrative and political sponsorship of official forecasts when they have never
demonstrated consistent or accurate results. As I hope this discussion has made clear, the
critique is not aimed at probabilistic methods, but at the task to which they have been
assigned, which in this case I argue is a technically impossible one.

The impossible task nevertheless is a politically useful and credible one: merely by
engaging in the act of forecasting posits the idea of a knowable and therefore controllable
policy problem. Beyond providing a useful illusion of bureaucratic control, prison
forecasts are also creating a normative case for action. These are projections, after all, not
of any population but a dangerous one. Failing to create secure spaces to put dangerous
people amounts to a dereliction of duty, and failing to take account of official forecasts
equates to a moral lapse. The involvement of risky groups renders statistical analysis
particularly vulnerable to politicisation. Lord Carter’s report on prisons, which made the
case for the Titan prison programme, exemplified this in re-formulating the internal
criminal justice causes of penal expansion into a claim about effective crime control:

‘The increased prison population of the past decade is a result of a concerted and
successful effort to catch, convict and detain for longer periods the most
dangerous and serious offenders’ (Lord Carter 2007: 1).
Thus prison projections have been deployed to serve the cause of penal expansionists. They have also provided ammunition for reductionists. Growing prison populations symbolise a failure of criminal justice policy since so many prisoners are repeat visitors. Projections then provide a worst case scenario to be avoided through expanded investment in prison alternatives. In these contradicting uses, prison projections resonate with Carlen's (2008) notion of 'imaginary penalties' where statistical analyses are one tool of a managerialism that provides the rationalist legitimation of an underlying and irrational populist punitivism. More important than the accuracy, or not, of the numbers is the fact that statistics as part of a wider discourse of quantification, have become a crucial mode of knowledge and communication for all involved. The statistical worldview has come to colonize the policy imagination, so that all sides articulate their positions in terms which are knowable and validated through the numerical.

Over the past fifteen years, prisoner forecasts have quantified fears of a tidal wave of prisoners heading for shores lacking in places to put them. The quantification of fear has led to, and provided legitimacy for, plans for penal expansion in the UK and the US. At the time of writing, the foot appears to have come off the pedal of prison acceleration as global economic contraction has limited the ability to transform cheap punitive rhetoric into costly reality. While this may be the silver lining in the cloud of public sector cuts, we should be wary of reform that is produced out of financial necessity. For this is change that does not challenge the underlying ideology which allows penal expansion to flourish when times are good. What is needed is something more radical, a recognition both of statistical forecasting as an act of imagination, and of imagination as a necessary tool of policy. We are then freed to assert new imaginaries, and to embrace the imaginary as a distinctive and liberating quality of being human (Sartre, 2007[1940]), allowing us to dream of and thus to make possible futures we want. Bauman writes that (2010: 109-110)

‘In our grammar we have the future tense, which enables us to imagine and visualize a state of affairs different from the presently existing – a ‘matter’ with quite different ‘facts’… the only way of “predicting” the future [is] to join forces and pool our efforts to cause future events to conform to what we desire.’
References


