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A Further Comment on Recent Claims in the 'Rehabilitation of Rehabilitation' Literature: Implications for Programmes Policy and the Long Term Deployment of 'Behaviour Scientists'

This paper is one of a series which constructively analyses the rationale for the recent resurgence of interest in rehabilitation. It is constructive in that its primary concern is to identify the critical factors worthy of investment in the overall aim of reducing recidivism and sustaining effective control. In recent years strong claims have been made in the literature that there is new evidence that treatment "works", the criterion of efficacy being demonstrable reductions in recidivism. This paper selects some salient examples of this literature in order to support the assertion made elsewhere Longley (1997a), that what these studies really suggest is that it may well be worth looking to inmate *attainment* or motivation as the primary independent variable, and that investment in a system which provides for the professional assessment and management of inmate attainment throughout sentence may prove an effective long term policy. The current paper provides some evidence to suggest that where researchers have claimed efficacy of certain treatment programmes to date, they have generally confused statistical significance with importance, and conflated the statistical hypothesis, with their substantive hypothesis (a brief explanation of this is provided in *annex 1* for those unfamiliar with the technology of statistical testing). The result is that casual readers are easily misled into concluding that research has empirically identified criteria of effective programmes. It is shown below that this is not yet the case, and that as a result current policy which almost exclusively deploys professionals as treatment managers may not be in the long term interests of the Prison Service, nor the professional careers of behaviour scientists now employed within the Service.

One of the most subtle, and technically delicate trends in the recent history of psychology has been a resurgence of interest in "cognitive" processes as elements of common-sense of "folk-psychology". Whilst to the casual student, this may appear to be a long overdue return to what psychology should concern itself with, it is, in fact, merely a turning of attention to the natural repertoire of a culture's folk psychological judgement as a legitimate subject of study in its own right. Careful study of this literature, which has been developing since the mid 1950s, reveals that the research interest is descriptive and explicative, not legislative or prescriptive. Whilst early research efforts assumed that it was appropriate to model reasoning and other cognitive processes using engineering and logical principles of how these processes work, in the early 1970s, this all changed. Evidence accumulated which forced researchers to appreciate that normal human rationality was prone to a range of demonstrable biases, and that the traditional normative models did not fit the accumulating data. People did not perform as the models predicted. A large body of research went on to show that little could effectively be done to correct these biases of judgment, and as a result, many considered the research to paint a rather bleak picture of human rationality (Tversky & Kahneman 1982; Nisbett & Ross 1980; Plous 1993; Sutherland 1994).

One positive outcome of this research was that it made significant and important advances in identifying the form which these constraints on human judgement take, as well as suggesting credible explanations as to how and why the biases come about. This in turn led to a growth in the literature studying the differences between natural, intuitive (cognitive) judgement, and that

of decision making made on the basis of normative, or quantitative analysis of data (actuarial) judgement. A wedge was thus driven between common-sense, folk-psychological judgment on the one hand, and normative scientific judgement on the other. Unfortunately, unless one has had to weigh up the relative merits of clinical versus actuarial judgment, it is unlikely that one will be aware of the acute deficiencies of folk psychology relative to normative analysis. For many, therefore, the 'cognitive turn' in psychology has often had the insidious effect of either being taken to justify the processes and results of natural folk psychological judgment, or of reinforcing vaguely held beliefs about the merits of working with how people think in the hope that changes to how they think will lead to other changes in their behaviour. Unfortunately, these popular and well-intentioned notions find little support in the wider professional literature - quite the opposite in fact. The evidence (Longley 1994) suggests that skills tend to be situation or subject specific, and that if you want to teach a skill, (with one or two notable exceptions) it is better to teach it as specific behavioural skills rather than as abstract principles.

In recent years, there has also been an alarming tendency for some professionals to act as if what is statistically normal, can be taken to be normatively defensible and acceptable to the point of being desirable - something which rarely stands close scrutiny. Nowhere has this been more damaging to the long term aims and objectives of behavioural science than where "cognition" has appeared in the professional literature. One of the consequences has been an increase in rhetoric and sophistry in the profession despite vociferous criticism by one of the most influential psychologists of this century - the late B.F Skinner. Instead of clear quantitative technologies of behaviour management in the field of rehabilitation, a search through the contemporary literature is likely to reveal little more than appealingly constructed pseudo-scientific classifications given specious support through the misuse of tests of statistical significance and dubious inferences from 'meta-analyses'. Whilst not targeting the rehabilitation literature specifically, this wider criticism was made a decade ago by perhaps the most influential of all writers in the field of actuarial over clinical judgment:

*Thesis: Owing to the abusive reliance upon **significance** testing—rather than point or interval estimation, curve shape, or ordination—in the social sciences, the usual article summarizing the state of the evidence on a theory (such as appears in the *Psychological Bulletin*) is nearly useless.*

P.E Meehl (1986)
What Social Scientists Don't Understand

A detailed critique of one of the most influential recent meta-analyses in the field of Correctional Psychology was the subject of the previous paper in this series (Longley 1997a). Many of the studies in such papers have taken to creating new *a priori* classifications, which, their authors claim, facilitate the rehabilitative process by more effectively targeting and partitioning sub-populations of inmates. For instance, Andrews (1996) writes:

'Major risk factors include the big four "antisocial cognitions", "antisocial associates", "antisocial personality complex" and "a history of antisocial behaviour".

D A Andrews (1996)

To the extent that risk factors and indices are quantitatively identified through sound actuarial analysis of well circumscribed classes of behaviour, it is indeed in the interests of effective regime and inmate management that such systems be implemented. However, it is not at all clear from the available literature that this objective is furthered by merely translating familiar folk psychological notions into technical jargon. The above claim by Andrews, for instance, is little more than a transposition of a series of ordinary language (folk psychological) classifications into new terms amounting to stating that criminals 'think about crime', 'mix with criminals', 'behave in criminal ways' and 'have criminal histories'. Andrews follows this with:

'The importance of these characteristics has pushed current theory toward a general social psychology theory of human behaviour that focuses on the importance of social learning'

(ibid)

'Social learning', when under formal, accountable control, is conventionally achieved through formal education and work. Statements such as Andrews' only have utility beyond what is achievable in ordinary language if the "new", technical classifications provide clear rules whereby inmates can be reliably, and cost-effectively, allocated to such reference classes. Only then can effective decisions be made about their differential management. To achieve this, however, one requires the implementation of professionally managed systems to support such classifications, monitoring and management of behaviour throughout establishments (both individually and corporately), as well as throughout the course of inmates' sentences. Where classifications are not derived from professionally managed systems, new terms are likely to amount to little more than rubber-cheques drawn on bankrupt or ephemeral practices. This is precisely what we have seen in much of the meta-analysis of the "what works" literature, and it is something of which the proponents of 'rehabilitation of rehabilitation', and their critics are all too aware. The problem is acknowledged implicitly by Andrews et al. 1990 in a footnote to their main paper:

The interventions of Hackler and Hagan (1975) were coded as nonbehavioral. William's (1984) Dallas program was coded behavioral in our study, in line with Whitehead and Lab's coding of the Collingwood et al. (1976) report on the same program as behavioral. Both studies of restitution were coded nonbehavioral in our study (only one of which was coded nonbehavioral by Whitehead and Lab). The Ross and Fabiano behavioral skills program was coded as unspecified because it was a comparison condition for a more appropriate program.

Andrews et. Al (1990) p.379

Lab and Whitehead (1990), in their follow up article to the Andrews et al paper remarked:

Assuming for the sake of argument that Andrews et al. are right in their assertion, the interventions should be considered in light of their psychological soundness rather than according to criminal justice sanction/setting, such a categorization is utopian. Consider just probation. Recent reports from California indicate that caseloads have exceeded 300 offenders in some counties (Petersilia et al., 1985)

and that funding in real dollars has plummeted dramatically. To call for the implementation of the authors' principles with such excessively high caseloads is chimerical. Even apart from caseload considerations, probation officers spend so much time on presentence investigations and other duties that it is pure fantasy to expect them to follow the psychological principles of the authors. It is our sober assessment that probation and other criminal justice sanctions will continue to be deficient in regard to funding, personnel, and other areas such that it is simply unrealistic to expect dramatic change.

Turning to the actual application of the principles of risk, need, and responsivity in the Andrews et al. study, there appear to be a number of serious shortcomings in the analysis. First, the authors fail to specifically define their terms. While they give general definitions, such as "The risk principle suggests that higher levels of service are best reserved for higher risk cases, and that low-risk cases are best assigned to minimal service," nowhere do they provide explicit information on what criteria are used to determine risk, need, and responsivity. The reader is asked to take their word that the categorization of studies in their analysis is appropriate. A specific example of this type of flaw involves the failure to define what constitutes high and low risk clients.

We assume that high versus low risk corresponds to the possibility of future deviant acts. Making such determinations entails the problem of prediction. While space limitations do not allow an extensive review of the literature on prediction, a brief presentation is necessary. There is little debate in criminology that predicting future behavior is, at best, difficult. Various studies (Farrington and Tarling, 1985; Monahan, 1981; Ziskin, 1970) show that false predictions exceed correct predictions in many analyses. Indeed, when false predictions exceed the 50% mark (and some go as high as 99%), one is further ahead by simply flipping a coin. More telling for the present endeavor is the fact that clinical prediction (the one we assume would be preferred in the proposed treatment assignments) performs worse than empirically based actuarial predictions. Interestingly, Cullen (one of Andrews's co-authors) and Gilbert (1982:114) have expressed serious reservations about the ability to ever make accurate predictions: "The technology for accurately predicting conformity simply has not been developed to the point where it can be employed with even minimal confidence. Indeed, given the complexity of the causal forces that underlie the criminal choices of any one offender, evolving such technology may constitute an insurmountable task." The inability, therefore, to accurately assess risk seriously undermines the possibility of using the "psychologically informed" treatment methods proposed by the authors. It could be argued that current judicial decisions on disposition of cases and assignment of treatment may be as good as a psychologist's predictions of future behavior and the resultant expectations of treatment outcomes.

Aside from the problems of prediction, an inspection of the categorization of studies by Andrews et al. reveals what appears to be an uncertainty on their part about specifying what constitutes high and low risk. For example, in some

instances low risk is assigned to first offenders and high risk designates all other clients (e.g., Horowitz and Wasserman, 1979; Mott, 1983). In the Byles and Maurice(1979) study, however, low risk refers to those with one prior offense, while the presence of two or more priors indicates high risk. Other times the authors define risk by type of offense (e.g., O'Donnell et al., 1979; Quay and Love, 1977), number of referrals

S.P. Lab and J.T. Whitehead 1990
From “Nothing Works” to “The Appropriate Works”:
The Latest Stop on The Search for The Secular Grail
Criminology Vol 28, 3 1990 pp.407-410

The classifications are all too readily made on the basis of *a priori* (albeit educated), intuitive judgement, not on the basis of quantitatively derived classes of behavioural data, and the theme of this general series of papers is that such classifications in general lead to a fog of interpretation and level of indeterminacy which make effective administration all but impossible. This is reflected by the degree to which false conclusions are so easily drawn from the literature, the most prominent being the conflation of the effects of programmes run in the community with those within institutional settings (as discussed in Longley 1993;1997a). It can not be simply assumed that “risk”, “need”, “responsivity” or any of the other “new” categories which have been constructed as usefully discriminating are reliable enough to support the weight of analysis currently being put upon them. Authors and reviewers alike have remarked on the problem of comparing “apples with oranges” when analysing outcomes of different studies within meta-analyses, and close readings of many of such papers reveal that criteria vary far too much to be of diagnostic utility (with the exception of actuarially derived risk assessments of recidivism, such as the Canadian SIR score). The objective here, as elsewhere in this series, is to show the impartial reader why many of the claims made in the “rehabilitation of rehabilitation” literature are vacuous, not only in terms of how they inevitably reduce to rhetoric, but also on the basis of the empirical data and methodologies presented by the authors themselves.

The remedial steps advocated here and in earlier papers, lie in:

- ▷
- ▶ ***1. the development and implementation of professionally maintained systems of behaviour management***
- ▷
- ▶ ***2. which can generate the data which is fundamentally required to ascertain which elements of residentially run programmes, if any, are empirically efficacious, and***
- ▷
- ▶ ***3. professionally analysing such data to maximize constructive use of all areas of attainment in support of effective and accountable inmate sentence management.***

These recommendations are made with a view to encouraging administrators to invest in an infrastructure which can be used to distribute locally generated best practice. Experience suggests that failure to take such steps is likely to have adverse long term effects on the profession of applied behaviour science within the UK Prison Service, jeopardize the effectiveness of any programmes which might have rehabilitative potential by leaving their effects to be damped down through the vicarious effects of an unsupportive general environment

(Andrews et al. 1990), and make inefficient use of IT systems which are available. The positive recommendations have been made before in the context of effective inmate Sentence Planning, and were made originally (Longley 1990;1992) on the understanding that if effectively implemented, Sentence Planning might make an important contribution towards maintaining control as well as reducing inmate recidivism (two objectives which were closely related in the recommendations of members of the Control Review Committee (1984)).

However, before such steps can be seriously considered, administrators need to face some unpalatable facts, and these are facts which were made in the early years of the Special Programmes initiative (Longley 1992;1993). On the basis of published data, *there is little if any reason to believe that adult inmate programmes, run in institutional settings, have any rehabilitative effect whatsoever*. The small effects reported in recent years (almost exclusively from research conducted in Canada) have been of marginal size, of borderline statistical significance, and, more importantly for the UK Prison Service *have all been observed in community settings*. Evidence substantiating this assertion can be found in Andrews et al (1990), as well as in the published papers of the Canadian consultants now lobbying administrators and governors to focus their available resources on the delivery of programmes which are largely “Cognitive Skills” based. This point bears repeating, as the rhetorical and present investment in programmes within prisons makes the empirically important facts easy to overlook. **According to the original and review studies published by Andrews et al (1990;1996), Porporino et al (1991), Robinson (1995;1996) and others, programmes generally do not work when run in prisons. It is a general finding that programmes that do work, do so only when run in the community, and even there, it is not clear 1) that the effects are large and general, or 2) that the cognitive elements of the course content is what is instrumental in bringing about the reported effects.** For instance, we are told by Robinson (1996) that:

‘Cognitive skills training coaches must undergo an intensive training and certification process. Participants are also carefully assessed and selected, and cognitive behavioural methods are matched to offender learning styles’

yet nowhere in the literature to date has evidence been presented, or methodological steps taken to specifically test the hypothesis, that the actual content of these programmes has any effect on recidivism. As a consequence, only a quite specious scientific **authority** is given to the content and efficacy of these programmes. Not only do the authors’ own data tell us that the very small (5%, $p < 0.05$) differences between community based treatment and comparison groups do not hold for high risk (incarcerated) inmates, but there is also evidence from the Canadian system that the differences observed in community settings are of the same magnitude as those observed between groups which are just differentially **motivated**. (Stewart and Milison 1996). That the “Cognitive Skills” programme’s effect might be based on the selection of motivated inmates was a possibility raised in a discussion of one of the early papers on “Cognitive Skills”. (Fabiano et al 1991). This important and potentially useful alternative explanation for the results becomes even more likely if we ask why programme “drop-outs” recidivate at a higher rate than those having no programme exposure. The answer might just be **‘motivation’**. This may indicate that the programme content is not the efficacious element, but that the observed results are a consequence of selection effects, ie that the methodology adopted by Robinson (1995;1996) and colleagues results in more highly motivated offenders ending up in the treatment group relative to the comparison and drop-out groups. All inmates for such programmes are volunteers, the

comparison group comprising a "waiting list" control group. Furthermore, those inmates in the waiting list control groups are in fact generally given the opportunity to participate in the programme at a later stage provided they are still motivated to do so.

“Control group members were placed on a "waiting list" and were permitted to enter the next available treatment group if they remained interested in the program.”

**Robinson D, Grossman M and Porporino F J (1991)
Effectiveness of the Cognitive Skills Training Program:
From Pilot to National Implementation
Research Brief No. B-07, Correctional Service of Canada May 1991 p.3**

The same is reported in Robinson (1995). This is likely to exacerbate differences between the overall levels of motivation between the treatment and control groups. Furthermore, as discussed in the earlier paper in this series (Longley 1997a) and as originally reported by the author back in early 1993, the Canadian authors themselves remarked on the fact that their research provided evidence for a motivation effect:

“In actuality, the estimated base rate is considerably higher than the reconviction rate we have observed for the treatment group (20%). This again suggests, quite convincingly that the program is effective in reducing recidivism. The actual reconviction rate for the comparison group is also lower (30%) than the expected base rate, suggesting that volunteering for programming may have beneficial effects in itself or that motivation for treatment may be influential in post-release success.”

Ibid p. 2 (my emphasis)

From this perspective, the small difference **between** the two groups is not as interesting as the difference between the treatment and comparison groups combined, compared with the actuarially predicted rate of recidivism based on the Canadian SIR index, upon which the two groups did not differ. To the extent that inmate motivation *per se* may be the instrumental factor, and to the extent that there is any support for these programmes being effective with sub-classes of incarcerated inmates, strategies designed to monitor and **generally** facilitate inmate motivation (measured by attainment) might, therefore, profitably be made the focus of rehabilitation efforts.

Were it not for the following, the criticism levelled here and elsewhere at advocates the widespread implementation of “Cognitive Skills” programmes might be regarded as somewhat harsh, given that amongst all inmate activities, there is little to single this one out for criticism more than any other. However the point being made here is that Governors should be making better use of what is known to date, and those advocating “Cognitive Skills” programmes have been **unambiguous** in claiming that the efficacy of the programme resides in the fact that it is designed to:

‘Target thinking, not behaviour.

This fundamental assumption reflects the core of the “cognitive model” of offender rehabilitation.’

Fabiano E A, Porporino F J, and Robinson D (1990)

It is this which is potentially so destructive. Not only does this claim explicitly contradict the general finding that where programmes do have any statistically significant effect, ***it is only where such programmes target behaviour*** (Andrews et al 1990; Andrews 1996; Losel 1996), but there is no evidence that the ***cognitive element, nor any of the programme’s content*** for that matter, is specifically instrumental in reducing recidivism. Claims to the contrary are, in the absence of such data, either rhetoric, or at best a classic confusion of the statistical hypothesis with the substantive hypothesis, and a more fundamental logical error of believing that in rejecting the null hypothesis one thereby confirms or adds credence to the alternative hypothesis.

This error, which is all too representative of methodological problems in much of contemporary research (Meehl 1967;1978;1986) was alluded to over 20 years ago by Martinson when he advocated the adoption of a systems approach in place of basic evaluation research. His proposal has been discussed at length elsewhere in the rationale for the PROBE/Sentence Management system (Longley 1993;1994;1997), the second phase (1990-1994) of which was specifically designed to facilitate the implementation of the second of two related recommendations on the 1984 CRC report that Inmate Programmes might be the most natural and effective way of managing control within the Long Term Prison estate. Developed as a sub-system within the PROBE project (1987-1996), Sentence Management was designed to provide an infrastructure to support the effective management of motivation on the basis of measures of inmate attainment, requiring staff and inmates to actively negotiate and contract realistic personal targets throughout sentence. The system provides records and profiles of all behaviour and staff/inmate transactions generating a data infrastructure in support of the effective management of behaviour, both in the long term interests of inmates and that of institutional control. A rudimentary, if somewhat partial implementation can be seen in the ‘Incentives and Privileges’ initiative.

There are good reasons why there is no empirical evidence from research in behaviour science to support the proposition that inmate programmes should:

‘Target thinking, not behaviour’

and many of these have been presented at length and in depth elsewhere in this series (Longley 1994;1997). Unfortunately, despite the evidence, subscription to this ‘cognitivist’ view has nevertheless become all too common in contemporary psychology - to such an extent in fact that it has acquired the status of a dogma, and an insidious one at that. As with most dogmas, close analysis reveals that it has little to justify it, especially as stated above. The problem has not been helped by the establishment of “accreditation committees” advising that the correct implementation of their programme packages will bring about reductions in recidivism (in spite of concrete evidence in their own publications to the contrary). Such assertions are likely to exacerbate the professional conflicts of those who do critically read the literature, now that delivery of these programmes contribute to Governors’ Key Performance Indicators. Questioning the evidence upon which the programmes are based is therefore likely to be regarded as subversive.

In the light of the above, it is therefore perhaps unrealistic to expect such staff to ask for evidence in support of accreditors' claims and demands for fear of undermining established policy now that such programmes have been accepted as regime elements. However, it does raise important and unresolved issues pertaining to the professional role and responsibilities of such staff.

That aside, it **is** reasonable to recommend that the future functional specification of IT systems make provision for the recording of the data specifically collected by the PROBE/Sentence Management. *More crucially still, administrators considering the resourcing of such systems should be fully appraised of the importance of budgeting for appropriately selected and trained professionals to use such systems in support of effective Sentence Management.* Programme assessment and evaluation would be a natural bonus from such an investment. In the event that administrators do not give appropriate attention to the fine details of the above, it is likely that the ***the current policy of exclusively recruiting and deploying professionals to manage and deliver Special Programmes will continue to undermine the status of the few staff who are still currently working to provide services in the quantitative analysis and management of behaviour.*** Unless a clear distinction in role is established and maintained between those tasked with programme delivery, and others who see their professional responsibility lying in the provision of an objective service in monitoring and analysing inmate attainment across **all** aspects of the regime, it is inevitable that the latter's services will be jeopardized through overstretching their resources as demands are placed upon them to deliver additional services in the area of treatment management.

The problem with the deployment of professionals exclusively as '**treatment managers**' is that it undermines present and potential services where behaviour science already has an important, **demonstrable** contribution to make - demonstrable that is on the basis of research evidence which has accumulated over the past 40 years. In the quantitative analysis of behaviour, behaviour scientists do have skills which **can** make a significant contribution to the running of establishments. That such (actuarially based) services can be shown to be effective is important not only in terms of value for money with respect to Governors' budgets, but also for the self-esteem of the professionals offering services. Such services have built-in accountability. The choice is a **serious** professional one, as Dawes, Faust and Meehl made clear in a major challenge to the profession in the prestigious journal *Science* in (1989):

'Research on clinical versus statistical judgement has had little impact on everyday decision making, particularly within its field of origin, clinical psychology.....The interview remains the sine qua non of entrance into mental health training programs and is required in most states to obtain a license to practice. Despite the studies that show that clinical interpretation of interviews may have little or no predictive utility, actuarial interpretation of interviews is rarely if ever used, although it is of demonstrated value.

Ultimately, then, clinicians must choose between their own observations or impressions and the scientific evidence on the relative efficacy of the clinical and actuarial methods. The factors that create difficulty in self-appraisal of judgmental accuracy are exactly those that scientific procedures, such as unbiased sampling, experimental manipulation of variables, and blind assessment of outcome, are designed to counter. Failure to accept a large and consistent

body of scientific evidence over unvalidated personal observation may be described as a normal human failing or, in the case of professionals who identify themselves as scientific, plainly irrational.

Finally, actuarial methods - at least within the domains discussed in this article - reveal the upper bounds in our current capacities to predict human behavior. An awareness of the modest results that are often achieved by even the best available methods can help to counter unrealistic faith in our predictive powers and our understanding of human behavior. It may well be worth exchanging inflated beliefs for an unsettling sobriety, if the result is an openness to new approaches and variables that ultimately increase our explanatory and predictive powers.

What is needed is the development of actuarial methods and a measurement assurance program that maintains control over both judgement strategies so that their operating characteristics in the field are known and an informed choice of procedure is possible. Dismissing the scientific evidence or lamenting the lack of available methods will prove much less productive than taking on the needed work.'

Dawes, Faust & Meehl (1989)
Science v243, p1668-1674
Clinical Versus Actuarial Judgement

It is worth repeating one sentence from the above:

'to accept a large and consistent body of scientific evidence over unvalidated personal observation may be described as a normal human failing or, in the case of professionals who identify themselves as scientific, plainly irrational'.

It should also be appreciated that such professional services in quantitative behaviour monitoring and analysis, designed to support all staff working with inmates (both on the landings and within activities) are likely to become increasingly in demand as establishments become more accountable for local deployment of their resources. Impressing the need for such services upon Governors now is no more than to make them aware of a service which supports implementation of clear and accountable management practices.

Nevertheless, it must be acknowledged that on the basis of the very limited opportunities resources provided to date, the average prison psychologist is likely to choose treatment management over the delivery of a service in the quantitative monitoring and analysis of behaviour. To benefit from what is now a proven technology, administrators and governors must invest in these services. They might also be encouraged to ask whether it is wise to promulgate a recruitment policy which primarily attracts staff who want to work with inmates exclusively at the 'clinical interview' and training level, given that there is little evidence to suggest that psychologists are any better in fulfilling such a role than anyone else (Dawes 1994).

It must also be understood that the decision to deploy psychologists in such a role is likely to be

working against selection of potential employees who might otherwise be prepared to turn their professional training towards the analysis of behavioural data in support of more effective inmate management. Partially because of this dearth of suitable professionals, the strategy administrators have taken in the past has been to look to large scale IT organisations to provide consultants, (a policy which is a reversal of what was the case 20 years ago when psychologists were recruited to provide computer based skills within Regional Offices). This new trend to look elsewhere occurred when the PROBE system was reviewed by HOSKYNS in 1993, where perhaps predictably, the consultants took the operational use of PROBE as evidence that it was ready to be routinely managed as a bespoke system by the IT department on behalf of an HQ client (Custody Group). It must be noted however, that for practical reasons, HOSKYNS finally recommended that the system be left in the hands of the developers within the Regimes, Research and Development Section of DIP. Despite that recommendation, and despite positive appraisal of the system's functionality by the HOSKYNS and Governors, a decision was made in late 1994 to pass the management of PROBE over to the IT Group and the HQ client. By September 1996, and despite protests from the Systems Manager, the PROBE system effectively collapsed through lack of professional coordination, quality control and development. It is important that administrators be made aware that the solution to the problems identified in this paper and others in the series does not lie solely in the provision of IT systems *per se*, nor in the production of a well drafted functional specifications "listing user requirements". These amount to little more than 'wish lists' if not supported by appropriately recruited and trained professionals who have the time, skills and resources to make constructive use of the data. IT systems are as useful as their users make them, and ***the effective, productive use of a Data Base Management System requires considerable skills in research and development within the field that the system is designed to support.***

Computers and databases are used by scientists of every persuasion, and they are used as integral elements of their repertoire of professional skills. It is important, therefore, to appreciate that the technology *per se* is merely one salient facet of a range of complex skills and procedures which ***together*** comprise a professional's repertoire. Before their invention during the IT revolution of the 1970s, Data Base Management Systems were just paper based data tables, algorithms, calculators and other scientific accessories - but even then, such tools were nothing without the professional analytical skills of the specialist who used them. The present situation within the UK Prison Service needs to be redressed not through the provision of monolithic IT systems which promise everything on paper (which as been done in the past to no avail), but through a specific recruitment programme designed to bring competent behaviour analysts into the Prison Service. Appropriately staffing such systems needs to be supported by properly designed and funded programmes of staff training, which in turn require adequate budgets to ensure that such staff are able to sustain and develop their technical skills. Whilst this is true of any large organisation which has behaviour management as a central concern, it is particularly true of the Prison Service, and is perhaps an area where the Prison Service should perhaps be leading the way. The basics are already available - it is just that the Prison Service has not accorded priority to funding those initiatives in the past, despite, I hasten to add, advice from several independent resources that this would be a sound investment. It is a deficiency of almost all large IT projects that too little attention is paid to appropriate professional staffing and ongoing training in support of such systems. It is a weakness which contractors are generally keen not to advertise to potential clients, and it is a weakness based on a poor understanding of human behaviour.

It must be clearly stated therefore that **professional monitoring and management of behaviour fundamentally requires the services of specially created and resourced behavioral science units, staffed and tasked with the specific objective of implementing and maintaining behaviour monitoring and reporting systems in support of the effective management of inmate behaviour across the full range of regime activities**. The deficiencies (distortions and biases) of normal, but limited human rationality, which have been revealed by extensive interdisciplinary research over the past fifty years, justifies and necessitates the adoption of systems which support effective data management in any large scale organisation, but particularly those which have accountable behaviour reporting and management so central to their corporate strategy. ***The need is for professionals who can make use of such data, not just the IT systems alone.*** Such staff are indispensable elements of any effective management team.

If this point is not fully appreciated there is a serious risk that administrators will be misled by wishful thinking, and promises of potential contractors; unless priority is clearly placed on the employment of professional behaviour analysts who can make use of such systems. It is only with the implementation of systems (such as that at HMP Parkhurst in 1993-4, and currently at HMP Garth), that the value of descriptive data and reports generated on the basis of such data comes to be generally appreciated by management. Such systems quickly reveal the inadequacies and inefficiencies of other forms of assessment and reporting, and whilst it is understandable that administrators might want to leave any decision regarding the recruitment and deployment of specialists in such a capacity until they have carefully examined the available evidence, it must be pointed out that there is already a large body of evidence and practice which has accumulated over the past ten years through projects such as PROBE/Sentence Management at various sites.

These factors might encourage administrators and governors to reconsider the 1993 (Longley 1993) recommendation for the creation of Applied Behavioural Science Units within the Prison Service. Such units would need to be staffed and resourced to specifically provide services in the quantitative analysis of behaviour in support of effective and accountable inmate reporting and management - themes which have certainly become salient over recent years since early work on Category A Sentence Planning of the late 1989. Given the positive reviews which the PROBE/Sentence Management system received from its clients throughout its development between 1987-1994 it remains something of an enigma as to why its HQ R&D support unit was closed in response to an earlier formal request for the creation of a properly funded Behaviour Science Unit in 1994. It would be unfortunate indeed if the English Prison Service sacrificed its initiative in this area to others such as the Canadian Corrections System, which looks increasingly likely given some of their recent research reports:

'Although prison labour originally played a punitive and deterrent role, it eventually came to serve the more practical purpose of teaching offenders marketable trades that would increase their chances of post-release employment.

More recently, correctional employment has come to be viewed as a potentially influential means of contributing to offender rehabilitation and re-integration into society. Although correctional employment typically focuses on concrete skills, it may also contribute to the development of positive work attitudes and behaviours (such as motivation and responsibility) that are transferable to post-release employment and life situations.

The correctional work environment has been recognized as a place where offenders can practise the skills they have acquired from programming intended to modify criminal attitudes and behaviour. As such, there is growing recognition of the potential rehabilitative value of correctional employment for offenders - it may contribute to skill development, attitude changes and eventual progress toward rehabilitation.

This article lends further support to this "new" role for inmate employment by focusing on the non job-specific generic skills that can be acquired through institutional employment and then transferred to a variety of real-world employment and social situations

Inmate employment: The increasingly influential role of generic work skills
Christa Gillis, David Robinson and Frank Porporino (1996)

This theme was expressed in the first publication in this series:.

'Any sentence plan must of course begin with a thorough and penetrating behavioural analysis of the criminal behaviour as well as the inmate's behaviour whilst in prison. In some cases, there are aspects to the offence which can be addressed through allocation to particular behaviour modification programmes (sex offenders or violent inmates). In such cases aspects of the assessment procedure have a reasonably clear focus. However, sentence planning cannot consist entirely of allocation to pre-determined regimes. It must also address other aspects of the inmate's criminal and other behaviour. This will require assessment of their educational, occupational, and social needs and skills. The proposal is that these needs be met through a set of programmes drawn from the industrial, educational, vocational and therapeutic facilities available within and between the prisons in the Dispersal System. Programmes of modular design with short-term goals (e.g. 6-8 weeks) would ease the problem of unpredictable security moves, and the monitoring of progress and ready transfer of information through PROBE (see below) would minimise the disruption such moves inevitably cause to some treatment programmes.

It is important to realise that these programmes though of modular form will mesh together and overlap in their effects, and it is through an analysis and careful scheduling of such programmes that Sentence Planning and auditing is in fact defined. It is not so much that Sentence Planning or Inmate programmes needs to be established, since in many senses this already happens throughout the system. It is rather that the present system needs to be more systematically developed, with clearer allocation and assessment procedures. For example, any properly organised educational programme will develop a number of skills in addition to the subject named on the timetable, such as social skills, communication skills, ability to co-operate with others, organise one's time and so on. Different courses will lay different emphasis on these 'hidden' aspects of the curriculum, and attention must be paid to them if a suitable programme is to be developed for any particular individual. Similarly a range of needs may be met

through the proper choice of occupation. Different jobs require and develop different abilities, for example interpersonal skills, concentration, reliability, responsibility, attention to detail. These will be present in varying degrees in all jobs, and a graded programme of activities can be used to address a range of problems in the natural context of the inmate's normal working day. Treatment need not necessarily and perhaps should not be seen as some separate activity grafted onto the prison regime. The range of activities available could be increased by re-organising those that already take place. Sewing mail-bags is frequently cited as an example of meaningless activity, but could become much more meaningful if re-organised as a mini-enterprise with prisoners taking responsibility. The enterprise would require secretaries, clerks, stock managers, charge hands, someone to deal with orders, perhaps a computer operator - in fact the whole range of activities, abilities and responsibilities that are normally present in any factory. This would not only increase the options but fulfill the CRC requirement of giving prisoners meaningful work.

An example of differential programming is provided by the AIMS (Adult Inmate Management System Quay (1985)) system. Inmates are classified during induction via Officer Behaviour Ratings and the control classification suggests different treatment for different groups of prisoners categorised as 'heavies' (hostile, aggressive, resentful, easily bored); 'moderates' (situational- normal, neither victims nor victimised); and 'lights' (unhappy, passive, withdrawn, submissive, or worried, anxious, depressed). The suggested programme-types for these groups is shown below:

	<i>Education</i>	<i>Work</i>	<i>Counseling</i>	<i>Staff Approach</i>
HEAVY	Individualised Programmed learning	Non-repetitive Short term goals Individual goals	Individualised (behaviour contracts)	By-the-book No-Nonsense
MODERATE	Classroom lecture plus research assignments	High level of supervised responsibility	Group and Individual (problem orientation)	"Hands-Off" Direct only as needed
LIGHT	Classroom Lecture plus individual tutoring	Repetitive Team-orientated	Group and Individual (personal goals)	Highly verbal Supportive orientation

Category A Sentence Planning, Adult Offender Psychology Unit (November 1990)

The AIMS system was an integral part of PROBE from its inception in 1986, formed the basis for the development of the PROBE Checklist in 1989, and was piloted at HMP Parkhurst in

1990, which in conjunction with the Category A Sentence Planning research led to a complete reconceptualisation in 1991. What ensued was an independent development of a more flexible and efficient Sentence Management system which could use all demands of the regime as attainment criteria against which inmates' performance could be assessed, thereby avoiding many of the problems inherent in psychological classifications. The system also provided a means of more efficiently identifying individual needs and targets on the basis of the actual behaviour of individual inmates. This system, illustrated elsewhere in this series, is covered at length in "***A System Specification for PROFiling BEhaviour***" (Longley 1994). Through subsequent development, and an industry-wide fall in hardware costs coupled with great advances in efficiency, Sentence Management now comprises a theoretically well grounded, and technically well instantiated infrastructure for the monitoring and management of inmate attainment across the entire regime. It has been used both in development form at HMYOI Feltham, and more fully at HMP Garth in support of the "Incentives and Privileges" initiative, and has been referred to approvingly as an example of best practice by the Director General and HM Inspectorate of Prisons. The system provides an actuarially based record of inmate attainment upon which individuals can be openly, and fairly, managed. Being cumulative and longitudinal, such records provide a sound basis for assessing behavioural *change*. For those showing a positive record of attainment throughout their period of custody one can at least point to some change in behaviour. Conversely, for those showing minimal attainment throughout sentence, such records provide evidence for a relatively poor prognosis. At minimum, a sound system of Sentence Management provides a basis for data based inmate reviews, and as such, it might be said that it might put an important contribution towards effecting control of future recidivism in the hands of Prison Service staff - providing it is professionally managed and suitably resourced.

Summary

Investment in a comprehensive system of inmate sentence management based upon cumulative records of inmate attainment in all areas of inmate activity can be supported by the research and wider literature.

Such systems must be staffed by professionally trained staff, recruited and resourced to provide support for all staff delivering elements of the regime.

The effective implementation of the above requires the creation of Behavioural Science Units within establishments with central support from HQ.

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Annex 1

The basis of statistical hypothesis testing is to set up a **Null Hypothesis** that there is going to be no statistically significant difference between an experimental or treatment condition, and that of a control group which does not receive the treatment. This factor which is under experimental manipulation is known as the '*independent variable*'. The 'substantive hypothesis' on the other hand, is, that this independent variable is the factor which will account for observed differences between the two groups in some outcome measure, known as the '*dependent variable*'.

However, because of the logic of these tests, it is only possible to reject the Null, or Statistical Hypothesis - it is not possible to confirm the '*substantive hypothesis*'. The substantive hypothesis only seems to gain support to the extent that all imagined alternative explanations have been controlled for (sometimes, claims are made *ceteris paribus*, ie all other things being equal or controlled for)

A simple example may suffice to make this clear. Suppose a teacher wants to tell if a new teaching style is better than an old practice. She may select two groups for her experiment. One which is taught using the new method, and another which is taught with the old. When she comes to examine the test results, she finds a significant difference between the two groups. However, all she can really conclude at that stage, without further analysis, is that there is something which may account for a difference between the groups, and that whatever that difference is, it is unlikely to be due to chance.

It *could* be the teaching method, but it could also be a consequence of a difference in natural ability between the two groups, or it could be an age difference, or a result of difference between the personalities of the teachers, or..... All of these factors would have to be tested by setting up further null hypotheses, something which invariably leads to very complex experiments which rarely meet the methodological requirements to support any reliable conclusions to be drawn. Sometimes, other explanations can be discounted as unlikely on the basis of research conducted elsewhere, and in the paper above, it is argued that the authors claim that reductions in the dependent variable (recidivism).

In the above paper, extensive research in mainstream psychology over the past 40 years renders it very unlikely that "Cognitive Skills" programmes would have any substantive effect on recidivism. These empirical factors should encourage the reader to seek alternative explanations for the effects reported by Robinson, Porporino and others. Failure to do so amounts to an unprofessional neglect of a large body of scientific research which has accumulated in fields outside the rather limited field of corrections.