

Invisible mechanisms

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The mandate for evaluators to ‘look inside the black box’ of an intervention has become a familiar *and* heeded cry. So whether it is process evaluators with their logic maps, or theories-of-change researchers with their intervention stepping stones, or realists with their context, mechanism outcome configurations, searchlights have been aimed into the gloom. So much so that a contemporary sounding riposte, ‘been in there, done for that’ might be deemed to reflect the current state of play in evaluation research.

This article, nonetheless, warns against complacency. It peers even further into the darkest reaches of the inky blackness, and urges other researchers to follow. It throws light on the presence of an overlooked set of program mechanisms, so deeply buried that they are almost invisible. The processes I have in mind are missed because they are tacit, mundane, over-familiar, and taken for granted and, as result, they often overlooked. And yet they are often responsible for a goodly part of impact of a goodly number of interventions.

As such, they deserve a sustained program of research and this article sets out a brief agenda for such inquiries.

Latent procedures in implementation and evaluation

Policymaking is energised by the hot new idea. Attention is thus drawn immediately to the unique properties and powers of the new ‘measure’, ‘treatment’, ‘therapy’, ‘mechanism of action’, or ‘theory of change’. To be sure, other eyes are always on the prize, namely impact on the intended outcome. Accordingly, interventions find support and are brought to life if there are persuasive reasons to believe that a new-fangled idea might have a significant leverage on a long-standing problem.

But what happens next? The machine takes over. The intervention and its evaluation are assembled in a series of standard procedures. The program has to be organised and delivered—sites are mulled over and selected, resources and staff roles are allocated, participants are recruited and processed. The evaluation, too, has a rhythm—cases are sampled, baseline parameters are assembled, processes are inspected, outcomes are assessed. The working hypothesis here is that these routine features, the generics of programming and evaluation, often have as profound an influence on program participants as do the big ideas.

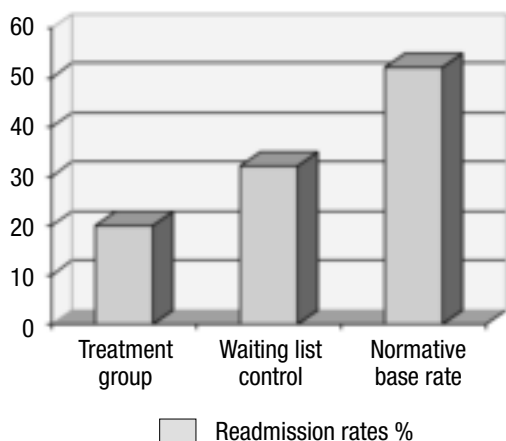
People enter programs at the margins and sometimes quite tangentially: they have a life outside programs; there are always other programs and life offers many new opportunities besides programs. And once within the ambit of a program there are many opportunities to quit or stay, and even within the camp followers, there is a range of commitments from 'passing interest' to 'abiding passion'. There are many such collateral pathways for so-called 'program subjects' to consider, and the mechanics of this movement from marginality to provisional membership to full membership has been overlooked in evaluation research.

Let us begin with a Cook's tour (i.e. swift but wide-ranging) around these subdued, contemplative quarters. *Where and when do invisible mechanisms begin to reveal their inscrutable faces?*

Behind bars

Long ago, whilst still sporting my evaluation 'L plates', I came across a simple chart that caused me to puzzle over it. It is reproduced as Figure 1. It shows results from a pilot investigation of a so-called 'cognitive skills' program aimed at reducing recidivism in a group of inmates in Canadian federal prisons (Porporino & Robinson 1995). Even within this population one cannot require subjects to attend programs. Subjects are volunteers and the conventional way of evaluating impact whilst countering the associated 'self-selection' effect is to run a trial comparing treated subjects with those who have also volunteered but are kept, often surreptitiously, on a 'waiting list'.

FIGURE 1: FINDINGS OF A PILOT INVESTIGATION OF A COGNITIVE SKILLS PROGRAM



The conventional reading of these findings is that the treatment indeed offers benefits, as can be seen from the lower rates of return to prison of the experimentees (20 per cent), as opposed to the waiting-list controls (32 per cent). The fact that we are dealing with a reasonably well-disposed group is also demonstrated by the gains in the untreated volunteers as opposed to the baseline rate, where the

revolving door of reincarceration revolves at over 50 per cent.

This interpretation of the data has basically two ingredients: the treatment with its power to change and the given predispositions of volunteer subjects. But neither of these factors explains fully what is going in the control group. What are the inmates doing and thinking whilst waiting? Are they growing impatient or are they learning forbearance? Is anger mounting? What's the point?

The answer, of course, is that we do not know. As far as I'm aware no serious research attention has been directed at the folks on hold.¹ But what should, at the very least, be contemplated are the powerful and potentially life-changing emotions represented by the participants' responses to the program. And as such, they represent our first sighting of invisible mechanisms.

I am trying to suggest, via the inmates' notional thoughts, that the members of the 'control group' are hardly in the state of repose that is suggested by that term. They are in the side-wash of the intervention and this location in itself can trigger impatience or anger or forbearance or fortitude. Lack of support does not turn them significantly back to the pack. At the very margins of a program, we witness a complex calculation. A future course of action is contemplated, an opportunity along the way is spotted and then stymied, and other ways of continuing in the direction of travel are apparently discovered. Here then is a brief glimpse of the latent action of a program—if all this reckoning and re-reckoning happens to subjects supposedly twiddling thumbs in the control condition, what other thought permutations transpire over the life-course of an intervention?

We stay within prison walls for my next illustration. The theme, however, continues—programs are not things, not dosages but complex social situations opening up a potential menu of choices within choices. What else might entice the subject to take a seat? What other imperceptible offerings might be served up? Duguid (2000), a practitioner, researcher and theorist of 'prisoner education', comes up with the following counter-intuitive recipe: offer education as a rehabilitative therapy and it will fail; offer education for its own sake and it will carry over into rehabilitation.

The idea was made manifest in the Simon Fraser Prison Education Programme. This campus-in-the-prison program ran for two decades in several Canadian penitentiaries. It was as avowedly 'mainstream' as far as the difficult conditions of imprisonment allowed. On offer were degrees and diplomas from Simon Fraser University; faculty crossed between university and prison; provision was full-time and year-round; the education block was separate and for the most part self-policed; credits were transferable to outside institutions; prisoner 'graduates' could become course tutors. And perhaps above all, talk of therapy, counselling, reform and rehabilitation was 'off-limits'.

How could these bread-and-butter features of campus life influence rehabilitation? In the following

passage, Duguid (2000, p. 230) provides us with a hearty list of invisible mechanisms that may account for program success:

- Community, self and authenticity: An ethical stance towards the prisoner based on interacting with him or her as a subject rather than an object. In its structural form this often centres on creating a democratic participatory environment within which the program operates.
- Bonds with the conventional world: A politics of prison programming that stresses the connection between the specific initiative and an institutional affiliation external to the prison and the criminal justice system.
- A structural approach that relies on diversity and complexity rather than singularity and simplicity, acknowledging that prisoner needs are many and unique and the intervenor's skills are various and limited.

It is perhaps useful once again to make the primary proposition clear. Neither Duguid nor I dispute the idea that other and perhaps more tangible aspects of prisoner reform, such as the improvements in employability or cognitive ability or social skills, are brought into play via such a program. The contention is that these gains are facilitated because of a culture, and it is this unadulterated, enduring and authentic taste of a learning environment that also offers the inmates a second chance. Can such a claim be demonstrated?

The issue of separating and attributing differential causal powers to the multiple mechanisms embedded in a program represents the toughest challenge for evaluation methodology. The third section of this article returns to this issue more generally. For now, we note the solution lies in the comparison of the differential success of different pathways through the program. Duguid's team (2000) used this approach to isolate the varied success of different subgroups and of different encounters with the intervention (following the realist dictum, 'what works for whom in what circumstances and in what respects'). But I am less sure how successful the research was on isolating the impact of the hidden mechanisms.²

Perhaps the nearest portion of the inquiry concerned the fortunes of the 'theatre group'. The specific argument is that such an environment embodies Duguid's latent forces (above) in a concentrated form, namely: in-depth emotional and intellectual study required to play a role; the need for spontaneous civility in mounting a production; a public sphere in which collaborative decision-making was of the essence; sustained detachment from the institutional imperatives (of both control and rehabilitation) within the prison. A group of prisoners rated as decidedly 'high-risk' prospered well on this particular program. Their predicted

rate of return to incarceration was a substantial 64 per cent compared to the eventuality at 45 per cent (Duguid 2000, p. 245). And whilst there was a generally improving trend throughout the program, these 'hard cases' thrived significantly better here than on other schemes.

To be sure, this is a mere fragment of evidence but it is a sign of latent mechanisms working their way through to manifest outcomes. If, moreover, one examines the direct testimony of the prisoner students, the action of the non-remedial remedy shouts out loud. For this, I return to some interviews of my own (reported in Pawson 1996) conducted in a UK prison, but on the same topic of how education might promote change in inmates. These were hardly cosy chats. Indeed the exchanges were somewhat fiery as the men clarified the matter of who was controlling whom. The common theme was about how education itself hadn't rehabilitated them but rather fired an interest already inside them, about how it deepened a process of self-scrutiny that was already underway.

... On the therapist's couch

For our next case study, we turn from the province of 'Nothing Works' to the domain of the 'Dodo's Verdict'. Alice, during her adventures in Wonderland, comes across a curious competition officiated by a dodo bird. It is a simple enough contest, a race around a lake. The twist is that no one bothers to measure times, distances, placements, and so on. Instead, the dodo opines: 'Everybody has won and all must have prizes'.

This same unflattering verdict has been bestowed on psychotherapy. There are many, many different therapeutic schools. One count, made 40 years ago (Parloff 1986), estimated the number at 418. A thunderous and longstanding critique argues that the specific techniques associated with specific schools (e.g. Freudian, Jungian, Rogerian, Adlerian, behavioural, cognitive, gestalt, existential, etc.) serve very limited purpose and that most of the positive effect is gained due to therapeutic *relationship*.

This hypothesis known as 'common factor theory' associates positive change with 'non-specifics' emanating from purposeful, warm, respectful, tailor-made, one-to-one relationships between practitioner and client.

Psychotherapy has always been a hot topic for evaluation. As related studies grew, they evolved a comparative component in which the efficacy of rival or alternative treatments was investigated.³ And as these 'x versus y' studies gathered pace it became possible to conduct meta-analysis of 'comparative treatment studies'. Studies of this ilk by Luborsky and colleagues in 1975, and repeated in 2002 with a much larger sample of primary studies, came down heavily on the side of the dodo bird verdict. Very few primary studies demonstrated the superiority of one treatment over another. In the round, the meta-analysis estimates that the effect size attributable to specific therapy techniques weighs in with a Cohen's *d* coefficient of only 0.2

(small and insignificant in lay parlance). By this interpretation all therapies are more or less equal and almost all should win prizes (or perhaps be amalgamated, simplified and demystified!).

It should be said at once that this interpretation is not without problems. Meta-analysis works at a high level of aggregation (Pawson 2006, Chapter 3), tending to pool a diverse medley of program characteristics in order to calculate a mean effect. Chambliss (2002) picks up this criticism, pointing to the dangers of examining ‘average differences between all sorts of treatments for all sorts of problems’. It remains possible that specific techniques may well be shown to be effective—if examined in specific respects by specific measures, and if one differentiates particular subgroups of subjects in particular circumstances. There is no need for us to referee this particular dispute. Whilst debate continues to rumble about the precise arithmetical contribution of the common factors in common factor theory, no one denies the import of the ‘non-specifics’.

It is much more useful for present purposes to look at attempts to discern and itemise the collective content. A number of researchers have attempted to locate precisely what is common in common factor theory. Following an extensive review of the client’s experience, Tallman and Bohart (1999, p. 106) sum up that:

from the client’s perspective, the most important aspects of therapy are the non-specific factors—the personality of the therapist; having a time and place to talk; having someone to care, listen and understand; having someone provide encouragement and advice; having someone to help you understand your problems.

What catches my eye about this list of invisible mechanisms is just how many of the features are also claimed in programs well removed from the formal therapeutic encounter. They are part of the rationale for peer education for drug abuse, buddy programs in prison, mentoring schemes for disaffected youth; coaching projects for would-be women executives, and so on.

Strupp (1986), from an earlier generation of research into ‘non-specific factors’, pinpoints a different causal mechanism, namely the guiding force of ‘theory’ in galvanising the psychotherapeutic process. The argument here is not about the express thoughts any of the 418 (or more) schools of thought. Rather it focuses on the very existence of ‘a theory’ in underpinning and guiding the intervention. The theory provides therapists with a resource capable of organising and planning the treatment. It also provides them with intensity and depth of purpose to keep them engaged over a long time. Finally, the theory may be said to certify and legitimate their particular approach. These capacities are no small matters from the point of view of the client.

Generally speaking, people who volunteer for programs are seeking to ‘work out an

understanding’. They are always on the look out for theories—the operative issue being that it is not only therapists who trade in explanations. When it comes to implementing programs—cops have theories, teachers have theories, big brothers have theories, ward sisters have theories, and safety inspectors have theories. All of them may gather adherents.

We are not yet done with the non-specific effects, for there is another important conjecture claiming that they kick in before treatment even begins. Rather than garnering lessons only from academic research, let us once again hear it from the horse’s mouth. In this case practitioner wisdom emanates not so much from the couch but the floor mat. Latey is the author of *Muscular Manifesto* (1979) and his thing is ‘movement therapy’. Whilst specialising in so-called ‘bodywork’, he has clearly spent time reading the minds of his clients. In the following passage, Latey (2001, p. 149) goes well beyond the customary recognition that patient ‘self-motivation’ is crucial by going on to describe how this vital spark might be encouraged and enhanced by creating certain preconditions to receiving treatment.

I believe it helps if patients have had to surmount some difficulties in order to get to see the practitioner, as follows:

- a wait for an appointment at a time that may not be easy for them
- some directions to follow if practitioners are off the map of their usual movements
- the effort of organising their account of the problem
- preparing to be questioned, examined and treated in the first session.

The fact that they are willing to pay for treatment, however small the fee, makes a considerable difference ... people expect to pay and do not count the cost when their health is at stake. Timeliness is also crucial. So it helps if patients have understood the problem is not going to clear up by itself, and they have reached a point where it must simply be sorted out. All the better if they have also abandoned previous attempts at treatment with enough time for it to be obvious that they have failed.

Here then is another raft of invisible mechanisms that may contribute crucially to program efficacy. We have already encountered perverse effects within waiting list controls and, interestingly, Latey (2001) also recommends being positively artful with the ‘keep ‘em waiting’ rule. However, this is but one of a number of other *pre-intervention* strategies that may be transferable—intensive openings, speed off the mark, quick wins, immediate active role for client, arrival in the last chance saloon, and not forgetting usage of that old advertising slogan, ‘You’ve tried the rest now buy the best’.

... In Fagin's Den

The roll call of invisible mechanisms continues with an article by Smith, Clarke and Pease (2002) under the title, 'Anticipatory benefits in crime prevention'. This is a useful extension to our thinking about tacit powers of interventions because the goal in this domain is to control and constrain potential action. Our previous examples cover attempts to facilitate fresh thinking and behaviour. Invisible mechanisms can operate in both directions.

Their central argument is that we should never jump to conclusions about the 'self-evident' causal powers of interventions. Crime reduction, for the most part, works by persuading potential offenders that the risk of apprehension and arrest increases under a newly installed program. Perception is the key and thus it may be that the *threat* of action of an intervention is as powerful of as the *specifics* of action.

Many programs appear to show improvement (crime reduction) before the program is up and running. Indeed, some seem to work without them being enacted properly. This hypothesis is examined on the basis of a review of the crime prevention literature. A search was undertaken locating studies that contained time-series data sufficiently powerful to distinguish crime fluctuations before, during and after the introduction of prevention programs. Fifty-two such reports were uncovered that revealed an unexpected pre-initiative drop in crime statistics. Of these, 22 had strong prima facie evidence that allowed causal attribution to 'something' occurring within the early inception of the scheme.

For instance, a study of the effects of security cycle patrols on parking lot crime showed that announcing the scheme was followed by a reduction in crime. Ending the scheme, moreover, did not result in an immediate increase in crime (Barclay et al. 1997). Further examples relating to the pre-installation of CCTV cameras, security devices, alcohol testing, physical layout improvements and so on are assessed and corroborated in the review (Smith, Clarke & Pease 2002, pp. 75–76).

So what is the 'something' that could account for these unanticipated anticipatory effects? Smith and colleagues (pp. 78–79) list 10 possible mechanisms, which I summarise further thus:

- *Evaluation artefacts.* These include some time-honoured measurement headaches such as regression to the mean, difficulties with calculating moving-averages, and the perennial problem of seasonal shifts in recorded levels of crime.
- *Practitioner and subject effects.* These include improvement in knowledge and motivation of the local population and police officers on the announcement of a new scheme, which translate into increased determination, greater diligence and better performance in advance of the initiative.
- *Offender effects.* These include both the 'over-anticipation' effect, in which equipment is

supposed to be operational before it actually is and the 'disinformation' effect in which publicity and hearsay carry the impression that a powerful, covert program is already in place.

Again we see a catch-all description, in this instance 'anticipatory effects', netting a miscellany of possible mechanisms. The point for reinforcement is that none of the above are part of the intended measure; all are part of the implementation and evaluation apparatus—and thus all are open to further and more mindful manipulation by program planners.

And it is this respect that the latter item in their list excites the attention of Smith and colleagues. If we think of crime, at least some crime, as an 'intelligence-led' operation then 'counter-intelligence' becomes an option in its curtailment. There is probably an element of this idea in all policing. Smith, Clarke and Pease (2002) consider the example of so-called 'informants'. These supposedly lurk in the underworld telling the police what putative offenders are up to. Just as beneficial to the strategy of risk enhancement is for them to inform putative offenders what the police wish them to think is happening.

How could such a mechanism be embodied in a formal intervention? The active ingredient in all the cases reviewed appears to centre on the circulation of information—getting the word out on the street. The optimal working example is probably the action of 'decoy vehicles' in reducing car theft. Cars and vans, similar to those favoured by thieves, are parked in high vehicle crime locations. They are fitted with technical devices making it possible to track or, sometimes, trap the intruder. Whilst this immediate and tangible mechanism is what does the job in apprehending offenders, it seems that hearsay buttressed by media campaigns is the invisible, diffusive mechanism that really brings down overall rates in a locality (Sallybanks 2001). The scheme makes would-be offenders ponder precisely at the point when they normally sense an easy picking. And that rumination is deepened if they have in mind television pictures of the speculator and embarrassing failure associated with being so outwitted.

... In swallowing the pill

Our search for latent effects ends with a critical case, namely clinical interventions. In the orthodox medical model, the causal powers of the treatment reside at the physiological level, allowing medication to attack viruses, kill cancerous cells, relax blood vessels, heal bacterial infections, boost the immune system, and so on and so forth. Abutted to this viewpoint, somewhat uneasily, is the complementary perspective arguing that much that is efficacious about treatment lies before, during and after the swallowing of the pill. We thus end our tour in these disputed waters and with the most famous invisible mechanism, namely the 'placebo effect' in medical trials. Despite Moerman's ironic quip (2002, p. xiii) about how easy it would be to write a placebo

book—‘because it would have nothing in it’—it turns out that there is a massive literature on the said topic.

It is useful to begin by reprising a note made earlier about life on the margins of a program trial—in this case as a member of a control or untreated group. Time does not cease for such assemblages. This is how Moerman (2002, p. 26) goes on to argue that it is ‘logically and conceptually impossible to have a no-treatment group’ in which disease runs its natural course⁴:

In order to do a trial, people have to be recruited and diagnosed for the condition under study: they receive some sort of examination, maybe an intensive and dramatic one. They give informed consent, perhaps after reading a long and complex document describing the study, the various treatments under review, and so on. They are then randomly assigned to three conditions: drug treatment, placebo treatment, or no treatment. It’s not clear what one will tell the group getting ‘no treatment’. Certainly their participation can’t be blind to them: they know they aren’t getting any drugs or placebos; a reasonable inference might be they are healthy enough not to need any. And after that there has to be a follow up, an assessment of the condition of the subjects after some period of time, or a diary of symptoms has to be kept. While these people have not had pills, they have had a great deal more than nothing.

Indeed, this quotation opens the door to even more possibilities. It describes the ‘no-treatment’ control group, but it is obvious that the ‘placebo’ control group has similar levels of contact with the experiment, if a slightly different conundrum to decipher about their place within it. Moreover, it is at least a possibility that dearth of treatment in the absolute null condition could promote despair about absence of hope rather than optimism about marginality of need. The sensible inference to draw from the above is that the treatment process is a long and complex business capable of attracting diverse inferences in the minds of inference-making subjects.

This proposition provides the theme for this section, for the history of placebo research is a story of how the core idea of ‘placebo’ has, by dint of close empirical research, been broken down into a number of component social and psychological processes.⁵ What we learn about these ‘meaning effects’, operating in clinical conditions where they are often considered marginal and a nuisance to boot, carries important lessons for social programs, where they are much closer to centre stage.

For empirical backing here I rely on several research reviews of ‘treatment dynamics’, ‘doctor-patient communication’, ‘self-healing’, and so on (Moerman 2002; Stewart 1995; van Dulman & Bensing 2002; Vermeire, Hearnshaw & van Royen 2001). I draw rapidly and selectively from these in identifying a handful of tacit encounters that might be particularly significant. As the case for invisible mechanisms consolidates, the material uncovered

in the clinic has strong echoes of latent processes already described.

It is by now a common cry that greater patient involvement in their own treatment may lead to improved outcomes. Stewart’s (1995, p. 1422) discussion of experiments on patient choice reveals some subtle distinctions that help to clarify the mechanism involved:

In one study (Morris & Royal, 1988) the fact that a woman was able to choose the kind of breast surgery to have [mastectomy or lumpectomy] was not found to be related to emotional health outcomes. In another (Fallowfield et al., 1990), going to a surgeon who permitted but did not force the choice, *was* found to be related to positive outcomes. I would suggest, therefore, that it was not simply the decision making power of the patient that was effective but, rather, the provision of a caring, respectful and empowering context in which a woman was enabled to make an important decision with both support and comfort. (References not claimed for this paper.)

The dilemma portrayed here, whilst horribly specific, harbours a striking resemblance to the lot of many program recipients. Subjects always choose but rarely choose the choices open to them, or know that much about them. Conversely, the deeper the contemplation of the choice, the more informed the choice, the more determined is the subsequent pursuit of the choice. It is no accident, for instance, that this process echoes earlier reflection on collaborative decision-making on offer in some prisoner education programs.

Choices cut both ways of course and another literature on (lack of) compliance with treatment can help us build our model of program pathways. Lack of adherence to treatment is another bugbear of the RCT. Dracup and Meleis (1982) conducted a pioneering inquiry attempting to fathom reasons for an initial successful and subsequent unsuccessful trial of the same drug for reducing blood pressure. It turned out the hypertension regimen was followed by 80 per cent of patients in the former trial compared with only 50 per cent in the latter. Since these early studies, research has turned to the reasons for non-compliance and that rationale has been explained in a theory known as the ‘health belief model’ (McGavock 1996). When confronted with an illness, people try to deal with it through their own experience, resources and folk wisdom. Later, when they arrive at a consultation, patients still bring with them a set of ideas and expectations about health and illness. There is no fixed point at which lay knowledge concedes to professional expertise, with the result that adherence to treatment can wobble throughout the treatment. Donovan (1995), for instance, reports on patients’ self-experimentation in modifying the prescribed drug intake to diminish the risk of side effects and in order to discover the lowest drug dosage that seems effective for them.

As long as there are doctors, their convictions will play an active role that cannot but influence medical outcomes. Moerman (2002, p. 45) provides an interesting example of the doctor-as-an-active-ingredient, which provides an explanatory glimpse into its operation. One routine context that prompts the ‘physician effect’ is the constant throughput of new drugs and treatments. These, of course, excite the interest and expand the knowledge of the physician. So much so that there is often a bizarre regression in which old drugs seemingly become less efficacious as new ones come along. Moerman reports on trials of drugs for ulcers. The original trials on the first drug (Tagamet) resulted in 72 per cent of patients being healed. Seven years later a new drug (Zantac) came and its trials showed a slightly improved 75 per cent rate of healing. A contemporaneous, second-wave of trials on Tagamet were also performed and, curiously, the efficacy of the same drug across the same population had dropped to 64 per cent. Enthusiasm, as they say, radiates and it seems that interest in the new drug was balanced by a disparagement of the old. These drugs are dispensed by injection and tested by endoscopic examination and there are opportunities at both ends for the subtle transfer of anticipation. The offer of a ‘new and improved’ regime may well be contagious.

Again, I charge Moerman (2002, p. 45) with providing us with the lasting lesson: ‘Doctors know lots of things. Many of the things they know they are unaware of knowing (as is true for many of us in this life). But it is the depth of their conviction that conveys to patients power of their treatments’.

Whilst clinical treatment is vastly different from other forms of social interventions, there is commonality across the four case studies examined here. What the placebo paradox and the ensuing inquiries tell us is that the path from illness to cure, should it materialise, is a journey rather than a turning point. A whole range of collateral—one might indeed say complementary—mechanisms facilitate the journey. Best practice in medicine rests on biological and physiological change but, as elsewhere, it also involves interweaving an array of psychological and social processes—some of them rather more opaque than others.

Unspoken mechanisms articulated

This section attempts to produce an abstract model of the pathway of change describing the cumulative, progressive, iterative transformations that typify the vast majority of social interventions. I am already blue in the face with arguing that social programs do not work through Pauline conversions, divine deliverance, instant redemption or miracle cures. They work by persuading subjects to change. And subjects, from the very beginning, will be relatively recalcitrant or willing. Subjects on the threshold of a program will ponder, wait, figure, investigate, and change their minds. Subjects over the threshold will dive in, tread warily, pull out, dawdle, support,

sabotage, take over, malingering, proselytise, and so on. Programs work to the extent that they can shift the tide, moving sufficient numbers of the marginal and refractory into compliance and commitment with the intervention goals.

Figure 2 attempts to map the pathway of subjects from first contact with a program to exit. It assumes that a long journey is involved and that subjects will fall by the wayside in many an intervention. It contains eight staging posts, reflecting changes as subjects move from marginality to membership. Each stage is depicted as a decision point for the program participant and at each stage includes the program processes designed to propel the subject onwards.

As such, it is a distillation of the many, many processes and preconditions captured in the previous sections reduced to a single sequence within an imaginary or ‘ideal-type’ program. The model is thus a middle-range theory (Merton 1967; Pawson 2000) in the classic sense in that it seeks to confederate a range of distinct empirical uniformities into an abstract model. The model allows us a clearer view of the underlying process, which can be formalised further by producing auxiliary hypotheses about how the sequences intermesh and what will happen if they do not. These propositions then provide an explanatory ensemble for predicting and planning other implementation pathways in other programs.

More concretely, one can say that the model already embodies the actions of a prisoner wondering how to go straight, an osteopath seeking to drum up more business, a cop spreading intelligence about a new crime reduction gizmo, a patient thinking about whether to tinker with treatment, and so on. All of these activities and more are captured by the abstract formulation of the model. And when the continuity of underlying constituent processes is appreciated more fully, the expectation is that the model will be transferable. It may be able to teach us something about the choices of program stakeholders thus far unconsidered, such as surgeons defending individualised waiting lists, disengaged youth wondering whether to bother with the latest government training scheme, company schemes trying to attract more minority applicants, and so on.

The top row depicts the decision points through which contemplative subjects pass. At all stages subjects are choice makers. The flow through the program may be continuous and to plan. Or, it might stall, short-circuit, or backfire. Or, to coin a phrase, it may move two steps forward and then one backwards. The bottom row reflects upon the opportunity for program planners and practitioners to encourage and propel each choice in the right direction. In realist parlance, this lower chain is an iteration of program mechanisms. And mechanisms, recall, are the resources on offer within the program that, if triggered successfully, work their way into subjects’ reasoning. From the vantage point of this article, the entire lower

FIGURE 2: PROGRAM PATHWAYS—WEAVING THE SUBJECT INTO THE PROGRAM

	1	2	3	4	5	6	7	8
Decision pathway for program subject	Awareness	Horizon scanning	Path selection	Gaining access	Initial reflection	Refraction/compliance	Full membership	'Graduate' and exit
	Subject becomes conscious that they might have a 'problem'	Subject casts around for solution for problem	Subject accepts 'diagnosis' located in specific program	Subject decides to give program an initial try	Subject reflects on first experience of program	Subject questions the worth of staying in the course	Subject buy-in and commitment to goals of the program	Subjects enact program goals and leave carrying durable lessons
Facilitation opportunity for policymakers and practitioners	Flag-raising	Contrastive publicity	Red carpet	Pull rug	Quick wins	Continuity	Empowerment	Attest, distance and recycle
	General publicity to name problem, climates of awareness, moral panics, buzz wordage	Promote intervention theory 'You've tried the rest now choose the best' Success of 'people like you'	Access and recruitment organised Intervention modalities explained and potential gains clarified through exemplars	Emphasise subject responsibility Test patience, commitment and effort	Provide access to expertise and interpersonal contacts, offering short-term personal gains, not necessarily related to final outcome	Stress participatory responsibilities Retest commitment and effort	Cede elements of control and support subject choices Emphasise co-production of the initiative	Confirm and 'certificate' gains Retreat and diffuse information on 'success stories' for use at stage 1

sequence should be understood as 'the program'. This representation, of course, is designed in vivid contrast to those research strategies that perceive and portray 'treatments' in glorious singularity.

With the basic model in place, it is then possible to extend it by postulating simple auxiliary theories about progress along the chain. We cash in its explanatory potential by making modest predictions about the need for integrity and continuity of the stages. For instance, a 'flows and blockages' theory would predict relative failure for those programs without comprehensive planning and implementation along the entire sequence. Meanwhile a 'loaded bases' theory would predict relative success for programs whose recruitment was secure so that they require little by way of publicity and promotion, so that most subjects have the head start of entering the scheme, so to speak, at stage 3. A 'joined-up thinking' theory would predict tensions in those programs having a marked division of labour between personnel responsible for promoting, recruiting, implementing and endorsing a scheme. A 'locals and cosmopolitans' theory would predict that individual practitioners rarely have equal control over, and skills in, dealing with the tacit and formal sections of the program pathway. A 'time is right' theory would predict that programs will struggle without an initial secular trend in climate of opinion in favour of its goals. A 'tipping point' theory would predict that program success requires a sufficient throughput of subjects at each stage for them to share responsibility for participatory progress.

More concrete, substantive examples of such hypotheses will be covered in the next two sections. The point here is simply to illustrate model dynamics, the potential explanatory power of envisioning programs as series of latent and manifest mechanisms of people processing.

Models simplify with a purpose, so let me now calm expectations about Figure 2 and the subsequent hypotheses. The most obvious point is that it is not to be applied mechanically. For instance, I am not claiming that eight phases, no more and no less, is the exact number of steps that must occur for programs to coalesce. Recruitment, selection and preparation may be automatic in some programs and exhaustive in others. Subject contact may be momentary or long-lived. Outcomes sought may be singular or multiple, they may be deep-seated or surface. Accordingly, the model may seem to elongate or compress the activities in any particular program.

But that, of course, is the point. The relative success of programs within the same family may often be explained because recruitment is simpler and more preconditions are met automatically (the loaded basis thesis). Youth mentoring provides an interesting example here. Enduring, prestigious programs such as the Big Brother/Big Sister (BBBS) scheme in the US report high levels of outcome success compared with newly established programs—even those that seek to replicate the same core body of activities (DuBois et al. 2002; Grossman & Tierney 1998). A plausible explanation here is that 'flag raising', 'contrastive

publicity' and the 'red carpet' are all firmly in place in a renowned intervention. The evidence here indicates that 'non-specifics' in BBBS are indeed lavishly and routinely primed, so much so that the program generates, wait for it again—a waiting list (Pawson 2006, p. 142).

The next point of clarification is to note that the model, whilst wide-ranging, is not claimed as a universal one. Its building blocks are drawn mostly from programs that provide new opportunities for individual clients, offered on a voluntary basis. These features mark its approximate domain. Middle-range theories are middle range in that whilst they attempt to 'conjoin different spheres of social behaviour', they do so in respect of 'delimited aspects of social phenomenon' (Merton 1967). Thus, Figure 2 would have to be reconfigured had we tried to make it apply, for instance, to community programs with collective actors, and also for mandatory (legislative) programs with generic subjects. And whilst I have suggested that some of its features are present in crime prevention programs, it would be wise to develop a different core model when the goal is to develop mechanisms for social control as opposed to precursors for opening up choice.

Finally in relation to Figure 2, it might be worth clarifying again a crucial ontological point, namely and more plainly—'What's it all about?' How does it differ in content from the 'logic maps' and 'theories of change', which are commonplace in process-oriented evaluation? Again I stress the point about the process under consideration here being 'content-less' in that they try to map out preconditions for successful engagement to all manner of programs. So, unlike some logic models, the pathway specified is not about project management. It is not about applying for funding here, spending it here, or hiring staff here and recruiting subjects there. Neither is it about targets and auditing, about the way a set of intermediate outputs have to be met in order to lead to final outcomes. Nor is it about those sequential theories of behavioural change and the way interventions act on knowledge that percolates into attitudes and then, hopefully, into behavioural transformations. Rather, Figure 2 is about the routine practices of people processing. It is about the latent mechanisms that attract, recruit, hold and embed subjects into programs—in order that the manifest mechanisms may come into play.

Evaluating the power of invisible mechanisms

If the above model of program induction and conduction is correct, even approximately, then it has profound implications for the conduct of evaluation. Let us commence with a brief 'don't' before moving onto a medley of 'dos'.

The sweeping interlinkage of mechanisms described above *is* the program. Evaluation strategies that attempt to excise, minimise, partial

out, or control for latent effects are missing the point. In social programs it is impossible to scrape away to the kernel agent for change, because change is always gradual and must be prompted gradually. The gallant attempts in clinical trials to eliminate human volition by double-blinding, the creation of waiting list controls and so on, should not be imitated in the evaluation of social programs. Such strategies merely camouflage the stakeholders' underlying choices, which are the genuine propellants of change. Hence, a waiting list from the point of view of this paper is not a null treatment, nor for that matter a performance target (for reduction). It is a choice, a moment when subjects ponder—should I stay or should I go? And the balance of such contemplation has profound effects for the progress of any intervention.

So much going on in the 'bow wave' and the 'side wash' and the wake of programs that it is not wise to imagine that we can ever truly replicate their journeys. Mark Twain once said that history never repeats itself, but it rhymes. The same is true in the recurring echoes that are social programs. Under this model it is inevitable that programs are always implemented differently and this must be the starting point for a renewed evaluation agenda.

Implications

- 1 More research attention should be paid to focusing on the stages in the above model—they and theories involved should become objects of inquiry in and of themselves. This would automatically bring to the surface the importance of invisible mechanisms. For instance, it would be quite possible to investigate the pros and cons of 'waiting lists' for a variety of different procedures, revealing no doubt different tipping points when their function changes from proving ground to detention bloc. Elsewhere in the model, the significance of 'quick wins' could be investigated across, say, regeneration programs, getting a measure of the importance of visible change for hard-to-reach populations. Such inquiry could be undertaken using primary research capturing these processes as they unfold, or by secondary review trying to piece together their imprint across a variety of programs and services.
- 2 More advantage should be taken of natural variation in program delivery. Such adaptation is obviously a feature of popular, widely-instigated programs, which will bear the marks of the localities and times in which they are developed. It is also true of most 'corporately'-sponsored initiatives. So in health care systems the same innovation will be trialled across a number of wards or units or hospitals. In regeneration programs a number of different 'partnerships' are often created to 'test-bed' the latest ideas. In drug harm-prevention schemes there is often a roll-out across many schools and youth centres. As a consequence, we can always say that the

routines of program development will always manufacture alternative ways of delivering the 'same' program. Such comparisons are more able to detect the significance of subtleties in program induction and throughput. How has access been managed in cases 1 and 2 and did it involve that same subtle mix of the red-carpet treatment and rug pulling? Was there a difference in opportunities for program participants to learn from each other and influence the direction and content of the initiative? Such investigations could learn lessons from the methodology used in 'small n' comparative research and its notion of configurational causality (Ragin 1987).

- 3 More evaluation effort should be targeted at those interventions where latent forces loom largest and most controversially. Because their physiological, microbiological mechanisms of action are apparently inert, absent or unknown, much complementary and alternative medicine (CAM) has been subject to charges of quackery. If, however, we take as the starting point that all interventions work by capturing hearts and minds as well as bodies, then a calmer approach to CAM evaluation can be contemplated (Bellavite et al. 2006).⁶ Issues such as interpersonal, physical, non-verbal rapport and empathy (in whatever treatment) could be studied as change mechanisms in their own right. There would be ample room here for the golden rule of studying the 'same' program delivered in different ways. Homeopathy delivered from the high street (by, say, Holland & Barrett, UK's largest retailer of vitamin supplements and health food products) will have totally different dynamics than when developed in prolonged relationship with the registered practitioner.
- 4 More evaluation effort should be targeted on anomalies, outliers and unexpected consequences in explaining program progress. As we have seen from examples above, such investigations of program 'failure' have often been undertaken in the clinical field to great success. Lack of adherence to treatment was first studied in explaining variability across trials. This topic evolved with Donovan's studies (1995) discovering the phenomenon of patients' 'self-experimentation' to diminish side effects and in seeking the precise and optimal dosages that *they* deem effective. If we begin here, with the notion that subjects always undertake interventions in ways that 'seem right for them', another line of inquiry is opened. Inflexibility of provision may well be a general problem in what is predominately a top-down game. Subject inspired 'distortions' will always occur. The crucial task for process evaluation then becomes: how and to what extent can such forms of resistance be incorporated, in ways that allow the program to work towards its original goals?

- 5 More longitudinal research should be conducted under the umbrella of evaluation. What happens upstream clearly conditions what occurs downstream. Most obviously, a poorly recruiting program or one that recruits the 'wrong' type of recruits is already on the high road to failure. But one suspects that flows and blockages occur throughout the life of a program, with equal significance for its fortunes. There are always refractory phases in the intervention pathway. Almost all practitioners in all fields will tell tales of gains lost when subjects perceive few signs of progress or when root problems return to enfold them. Program elements promoting reliance and stubbornness in pursuit of a goal might be as important as those designed to impart the skills and qualifications to achieve the said goal (Shiner et al. 2004). Our basic model tries to capture this process of continual reinforcement towards an objective and it could be used as a template to monitor the tempo of different groups in different conditions as they pick their way through a program.

These recommendations, of course, just begin to scratch the surface. The crucial point is that the coordination of a whole series of ideas and agents is required to create durable change. Evaluating program synchronicity will pay considerable dividends.

Notes

- 1 Consider for a moment a seemingly bizarre reading of the data in Figure 1. Since the waiting list control group registers considerable improvement over the norm, might this suggest that an efficacious and cost-effective way of reducing recidivism is to offer many such courses but not bother to get round to running them? Crazy? Well, yes in that such reasoning overlooks the self-selection of the volunteers. But, as we shall see later, 'decoy' interventions have become a real part of the policymakers' armoury.
- 2 I can assert this with some confidence, for it's high time I revealed that I was part of the research team.
- 3 These are known as 'active treatment comparisons'. Instead of randomly placing patients in treatment and control conditions, they are assigned to one of two treatments (e.g. cognitive versus behavioural). This ensures 'fair' comparison on a matched population.
- 4 He is describing a clinical experimental design, purportedly the ideal design, which operates with three groups, namely experimental, control and untreated. The first two receive a 'treatment' without knowing whether it is pill or placebo. The third is simply 'untreated'. The idea is that this strategy will perform the hat-trick—differentiating real effects from placebo effects from the null condition.
- 5 The first and most famous review of the placebo effect (Beecher 1955) made the claim that in the trials he examined there was a pattern whereby both experimental and control groups tended to show improvement. He estimated that one-third of the control group typically responds to placebos.

- 6 Bellavite and colleagues have produced a sequential, multiplicative and, thus what looks to my eyes, sound template for such evaluations: ‘One can assume that in a homeopathic cure a complex interaction of these mechanisms occurs: (a) a small physical action of extremely low-dose remedy, (b) the activation of centres responding to “placebo effect” due to beliefs, expectations of the patient and (c) the endogenous healing mechanisms. If this is the case, the therapeutic effect is due not to the sum of these factors but their product and any procedure decreasing or shutting down one of them (as blinding undoubtedly does) may markedly affect homeopathic cure, much more than allopathic drug effect’.

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