Behaviour analysis in work and therapy

The trouble with rules

In his Presidential Address at the 1998 Annual Conference, **Chris Cullen** *argued that rule-governed behaviour is often insensitive to external changes.*

This Address was dedicated to the memory of Mary Last who died on 4 March 1998.

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ON 20 November 1997, Mr Jim Compton died of heart failure in a public lavatory 20 yards from the Accident and Emergency Department of his local hospital. Staff had been asked three times to come to his aid, but had refused because they believed it to be against the hospital rules for them to treat people outside the building. This is the sombre side of what I am saying in this address. I hope that, even though there are more light-hearted and less serious examples later, people will still appreciate the seriousness of the issue. However, I turn first to something completely different.

The trouble with skiing

Competent sports people of all kinds may initially acquire their skills by following instructions, but when they later engage in the free-flow of their activity, they are often unable to specify, except in the most general terms, the rules they are following. For example, expert skiers may not know that the force acting when they go straight downhill is understood by the equation $Fg \sin a = Fw + Ff$, and that when they weight and unweight their skis the appropriate equation is $Ft = Fg \cos a + Fd$ (Loland, 1993). Nor do they instruct themselves, unless in difficult or specific circumstances.

Sports psychologists studying closed-skill situations, such as taking a penalty in football or putting in golf, have found some evidence to suggest that, under these circumstances, self-instruction may be helpful (cf. Wolko *et al.*, 1993). However, the execution of open-skills (such as in downhill skiing) is more governed by the second-by-second contingencies of the moment, and the competent sports person appears to know what to do by instinct.

I took up skiing relatively late in life, with the intention of complementing my passion for mountaineering. I have never achieved much style at downhill skiing, although eventually I have become able, using brute force, to get down (and up) most slopes without too much difficulty. The most important aspect of ski-mountaineering is to stay in control and never fall over — something which can be done by a combination of side-slipping, gentle traversing and kick turns.

On one occasion, when with a group on the Haute Route from Chamonix to Zermatt, in the European Alps, we had to traverse a very dangerous slope above the Lac de Dix. For several days it had been snowing hard, and the slope was avalanching regularly. However, we had little choice but to proceed as smoothly and as quickly as we could in order to reach a hut in which we could spend the night.

My lack of technique resulted in very slow progress, and my friends behind, who were unable to overtake, were becoming increasingly restless. I was nervous about slipping down the steep slope into the lake which beckoned many hundreds of feet below. Consequently I was leaning into the slope, which resulted in frequent falls. At one point, one of my companions observed that if I didn't ski faster we were all in serious danger of being caught in an avalanche. He gave me the instruction 'drop your left shoulder', which seemed to me to be a completely unnatural act and somewhat counter-intuitive. For some time I refused to even try, but under the threat of physical violence I finally did it. To my astonishment, I gained much more control and speed in the traverse.

This is an example of a simple rule acting effectively in a closed-skill situation, but this would be a relatively unusual case. Complex behavioural

repertoires are governed by sophisticated contingencies. I mention this example here to emphasise that I am not saying that rule-governed behaviour is never useful. However …

Rules and social skills

I now want to explore, as an example, the complex set of behavioural repertoires we call social skills. For those of us in clinical and educational practice, it is often the case that we try to help people who have inadequate or inappropriate social skills. The big question is whether or not it is possible to teach something as complex as social skills.

Rosenfarb *et al.* (1989), for instance, reported a study involving a clinical population. They had 36 clients who were solicited via newspaper, TV and radio advertisements, all of whom were judged to be inadequate in social situations. They were each randomly assigned to one of seven treatment conditions, which in effect manipulated either the type of instructions or the type of feedback given.

Treatments were conducted individually in eight 50-minute sessions, in which clients and therapists role-played problematic social situations involving making and refusing requests. The two main findings of this study were that people who received experiential feedback from their therapist improved significantly more than did other clients, and those who received instructions, or who developed their own instructions, failed to improve significantly more than did other clients.

What we see here is the relative supremacy of contingency-shaping over instructional-based training, a finding which is repeated time and time again in the research literature.

Constraining rules

I will now turn to the question of rules within systems, and first to the effects of implicit and explicit rules on staff behaviour. Cullen (1987) reports data from a project carried out with colleagues Mark Burton and Maria Thomas. This work started as an investigation into staff training in a learning disability setting, but we quickly discovered that many of the reasons for the residents of a small institution failing to acquire or use self-care skills had less to do with staff training than with some of the implicit and explicit rules of the institution.

For example, for men there was a rule that 'each person had to be shaved before breakfast'. Staff started work at 7.15am, and breakfast arrived from the kitchens at 7.45am. This allowed insufficient time for staff to help residents learn to shave themselves. So what had devel-
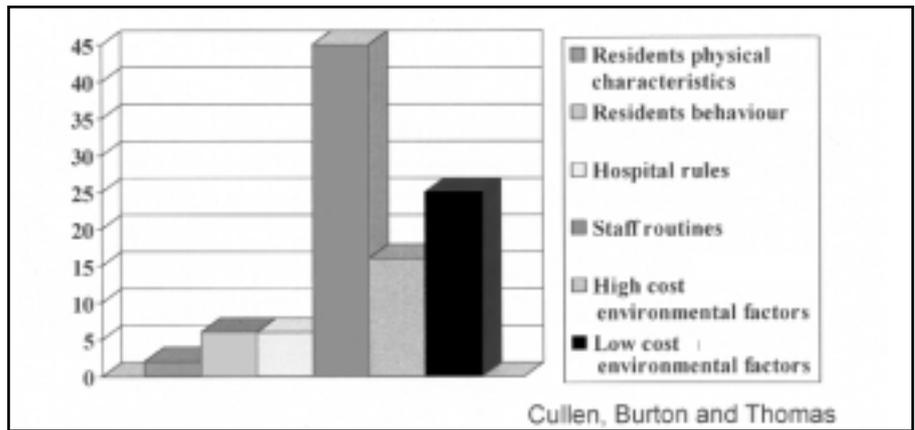

Figure 1: Constraints on residents acquiring or using self-care skills

oped over the years was a scenario familiar to those working on Australian sheep farms, wherein two members of staff would position themselves one on either side of the room and shave all the residents in sequence, literally grabbing them as they passed by. Another rule, that 'each person has his own electric razor', interacted with the implicit rule, that 'people may share their possessions with others if they wish', to allow this conveyor-belt style operation.

Sometimes there were rules of the organisation which had an understandable logic to them, such as the one which prohibited nurses being on their own in a bathroom with an unclothed resident. Since many of the bathrooms had two baths anyway, what had developed was a practice in which two nurses would bathe two residents at the same time, often with another two residents sitting waiting. Little surprise, then, that the residents would score poorly on self-care skills assessments which asked about the extent to which the person valued privacy.

We categorised each of the constraints in terms of whether they related to physical characteristics of the residents;

residents' behaviour; formal hospital rules; staff routines which had developed over time; environmental factors which were costly to correct; and environmental factors which would be relatively easy to correct. Figure 1 shows that staff routines — which may be described as implicit rules — account for the largest proportion of the constraints on residents acquiring or using self-care skills. Low-cost environmental factors, such as some toilets not having toilet paper, are also tied quite closely to implicit rules which staff were following. For example, staff would explain the absence of toilet paper by reference to the behaviour of one or two residents who would put whole rolls of paper down the toilet, hence it was 'better' to keep it in the office cupboard.

What has happened here is that rules imposed by staff had a major and catastrophic effect on the lives of residents with intellectual impairments.

Coercive rules

In organisational settings, rules and regulations are devices by which we try to ensure that staff do what they ought to
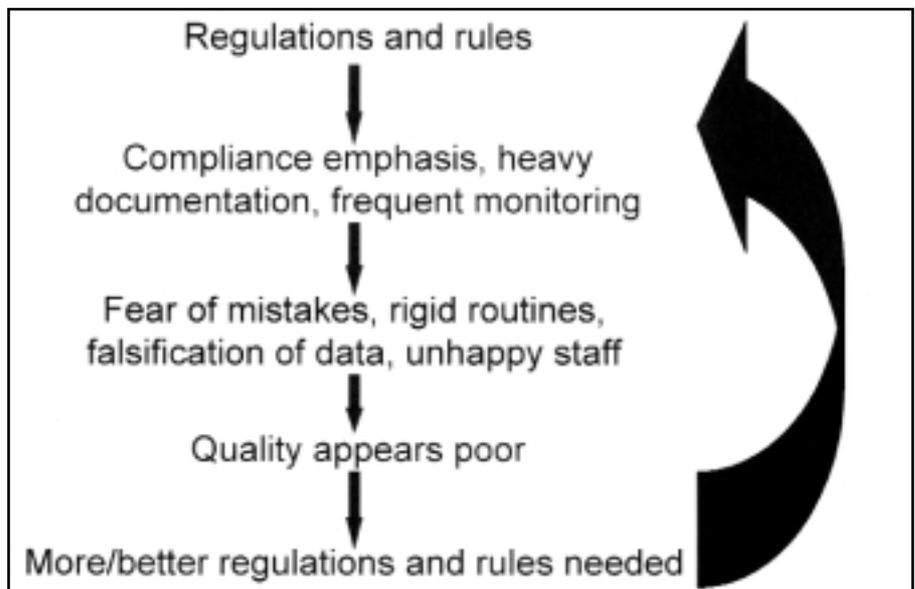

Figure 2

do, and I have more to say about this below. However, there is a well-known problem in the staff training/management field which is described by Figure 2.

Many of us have direct experience of this approach in a number of settings. Enlightened managers and trainers know that, whereas it may be relatively easy to force staff to behave in various ways by the use of rules and regulations — after all, people don't want to lose their jobs — what is far better is gaining their involvement, co-operation and ownership. This does not come by telling people what to do and not to do, nor by arranging punitive consequences when they fail to follow the rules. It happens when people are given responsibility — when they are empowered.

Some years ago, I was discussing this issue with the head of staff training for one of the largest UK financial institutions. She agreed that this was one of the major problems facing any organisation with an employed workforce. She encapsulated it as the distinction between compliance and commitment.

Rules and the Society

In preparing my Presidential Address, this has been the most difficult section, since there is the ever-present possibility of causing offence to specific individuals. I must declare at the outset that this is not my intention; I am impressed by the dedication of individuals who voluntarily give up their time to work for our Society. However, in order to fulfil our mission we must be prepared to examine how we function, and I believe that some of what we do — which reflects a set of implicit rules — leads to a significant wastage of time and effort.

One such implicit rule is that whenever we have a problem to solve we set up a working party. I want to remind members of the Society of three major exercises we have engaged in during the past 10 years and to invite consideration of whether we have wasted time, effort and resources.

In 1988, the Scientific Affairs Board (SAB) published the fruits of a working party under the title *The Future of the Psychological Sciences: Horizons and Opportunities for British Psychology*. This was the result of 14 meetings and a major conference over a period of two and a half years and involved the efforts of 10 senior members of our Society. The report had no less than 68 key (*sic*) recommendations. When I first read through these I thought that many of them were worthy and sensible, but 10 years on I find that very few — probably none — have been implemented. For example, one recommendation was

[t]hat the Society publishes on a

regular basis, information about recent examples which illustrate the contribution of psychology to well-being.

The Society has no such list. Another was [t]hat the Society should consider the establishment of a psychology think-tank devoted to the development of major social policy initiatives designed to identify psychological contributions to a better world.

There is no 'think-tank'. But was one ever considered?

At the time this report was received, I was chairing the Professional Affairs Board (PAB). I did not sense great enthusiasm for this report from any except a few dedicated individuals (the large number of copies produced are mostly still at the Society's offices). I therefore resisted suggestions that the PAB might undertake a similar exercise. I argued that we first ought to wait to see whether the SAB report had any effect.

However, shortly after I left the chair the PAB did set up its own group — the Task Force on the Implications of Changing Trends in Professional Psychology — which submitted its report to Council in 1991. This had taken 18 months' work by 11 senior members. It was a rather different type of report. It presented four proposals, six recommendations and four actions, which seemed to overlap somewhat. Many of the issues raised are important, but I can find very little which has been taken forward within the Society. For example, Proposal 2 is for

[a] discussion paper to be produced on the demographic base of the profession which might result in research proposals that could attract external funding.

This did not happen.

I wonder why this report should have had so little influence in the Society? Perhaps the fault lies in the style of the document, a factor anticipated by its authors. They say:

The Board took the view that it did not wish to aim towards a report, as had been the outcome of the SAB's working party. Rather, the approach to be taken was to focus on the *process* of change and development rather than a *product.* …

It must be said that not everyone has appreciated or agreed with this line. There is something rather more inherently 'fuzzy' about a process approach — much better to have a written document or other specific 'hard' outcomes which are clear products. However, this was not our view.

The third and final example I will

consider may have distal connections with the 1991 PAB report. In 1997, the Council received a report from the Council Working Party on the Development of Psychology as a Profession. This group had 13 senior members and met 14 times over a period of two and a half years. This report, however, offered just four recommendations. These recommendations contain a plea for more rule-governance, and thus have a direct relevance to the topic of my address. The first of them is

that the Society continues urgently to develop formal procedures to ensure proactive planning … the allocation of specific responsibility portfolios to individuals, and the regular monitoring of achievement and progress…

Although this, to some ears, may sound sensible, there is a fundamental mistake in assuming that formal planning will automatically lead to action. Campbell and Alexander (1997) point out:

… the popular management author Tom Peters is famous for having offered $100 to the first manager who could demonstrate that a successful strategy had resulted from a planning process. He has never paid out. (p.42.)

The second recommendation was to establish job descriptions and achievement targets for honorary officers such as the President, Honorary General Secretary and Honorary Treasurer, since to do so would 'ensure effective leadership'. This follows directly from the working party suggestion that the problems of the Society are the result of past failures of leadership. When this notion was raised at a colloquium in March 1997, some of us present were bemused, since the individuals putting forward this analysis had themselves occupied senior — and presumably leadership — positions in the Society for a number of years. This prompted two participants to observe:

It is odd indeed that such long-serving representative[s] of the great and good … should, in effect, be calling for revolution. If this were to happen it would be the first time in history that an overthrow of those in charge had been instigated by those in charge. (Newnes & Cohen, 1997, p.48.)

There is a mistake in believing that effective leadership comes from rule-governed approaches such as following job descriptions and meeting achievement targets. That approach may make a sound middle manager, but it is not what

The Society office

leadership is about.

The third recommendation was to engage 'an organisational change consultant to examine the functioning of the Society'. The fourth recommendation elaborated this by suggesting that 'the Society considers what further steps it needs to take to enhance its public image, and [surprise surprise!] this might also call for the appointment of a specialist consultant and/or the establishment of a new Working Party on the Public Image of Psychology'.

I am, of course, uncomfortably aware of the (implicit) rule that it is considered bad form to criticise what is produced when we work for the Society. However, as I said at the beginning of this section, I have no desire to be critical of individuals, but to raise a question about whether these ways of doing things are helpful. I may yet be proved wrong in my assertion that such rule-governed approaches are wasteful and lack creativity, but so far history is on my side.

If I am correct, then we — The British Psychological Society — should be considering new ways of ensuring that we engage our members in carrying out our mission to promote the science and practice of psychology. Establishing further working parties, tinkering with organisational structures, and making up new rules will not do the trick.

Workplace rules

The Society itself is a relatively large and complex organisation, with around 30,000 members and an office workforce of approximately 85. What more innovative and creative approaches might we adopt? We could look at how other organisations address their problems of structure and function.

Part of the title for my Presidential Address comes from one of the chapter headings in Semler (1994), and although he would probably not describe himself as a behaviour analyst, his central message — that rule-following leads to rigidity — is well supported by his experience. I cannot go into all the details of what he describes, but one example will give the flavour of how Semco, a large engineering company, is managed.

In common with most large organisations they had their own car fleet, together with a department specifically charged with the responsibility for tracking mileage, renewing registration, reminding people when to change tyres or to have the car serviced, and so on. However, the department was constantly ensnared in conflict, with cars breaking down, with battles over there being no alternative vehicles available, with department heads receiving bills for servicing on cars when they hadn't budgeted enough, etc. Semler reports:

From this we quickly concluded that some departments were better

not created and some rules are better not written. Common sense would be the best alternative, by far. But we were careful. We didn't want to rattle an already jittery crew. There was no grand announcement of our decision. Over the next three or four months we simply collected all our procedure manuals. (Many months later we did the same with our organisational chart, not that we had consulted it much.) People would ask us from time to time when the new manuals would be ready. Eventually, some began to suspect an update wasn't going to appear and asked us why. Only then did we say aloud what we had been thinking: that we were trading written rules for common sense.

And that is the system we have today, which is barely a system at all. When you get a company car at Semco, you can do anything you want with it. If you have a friend who is a mechanic, have him take care of it. We want our employees to treat Semco's vehicles as they would the family sedan. We're comfortable having their judgement applied to our car as well as theirs. (Semler, 1994, p. 93.)

A careful reading of Semler's book will easily repay those looking for examples of how success follows the cutting away of inappropriate rules.

Rules in therapy

When one paints the picture, writes the symphony, produces the machine, tells the funny story, gives affection artfully, the world responds with prestige, money, social response and love. (Ferster, 1967.)

Written more than three decades ago by a distinguished behaviour analyst, this quotation calls attention to the importance of natural reinforcers. We have known for a long time that behaviour established using reinforcers which are not normally available in a person's environment is not so durable (or natural) as behaviour which is maintained by natural reinforcers (Cullen *et al.*, 1977).

This has major implications for therapy, since much of what we do as clinicians, psychotherapists and counsellors involves setting up unnatural situations (such as people discussing their personal problems with a stranger in an office) in an attempt to achieve lasting, meaningful change.

Natural reinforcers occur with little planning or awareness. They are intimately tied, in a moment-by-moment way, to variations in a person's behaviour. Arbitrary

reinforcers lack this fine-grain natural relation to behaviour. When arbitrary reinforcers are used in therapy, the behaviours reinforced are different … than those reinforced in the client's natural environment. (Rosenfarb, 1992, p.346.)

Enjoining therapists to use natural rather than arbitrary contingencies is at the heart of an exciting and innovative perspective called functional analytic psychotherapy (Kohlenberg & Tsai, 1991). The essence of this approach is that treatment is more effective when a client's maladaptive behaviour occurs in the presence of the therapist and when the therapist is able to model and shape more appropriate client behaviours. To do this therapists must work with clinically relevant behaviours, in natural rather than arbitrary therapeutic contingencies. Clinically relevant behaviours are:

● Client problems that occur in the session. An example might be a person who does not know how to make friends avoiding eye contact with the therapist, answering questions by talking at length in an unfocused and tangential manner, having one crisis after another and demanding to be taken care of, getting angry at the therapist for not having all the answers, and frequently complaining that the world is unkind to them.

● Client improvements that occur in the session. For example, a previously unassertive client makes a polite but direct request to a therapist to be on time for sessions.

● Client verbalisations which describe their behaviour and what causes it, both during therapy and in their normal environment. For example, a client recognising and telling the therapist that she usually withdraws whenever she becomes dependent in a relationship.

Kohlenberg and Tsai (1991, pp.63–68) point out that there are many therapy situations which may evoke clinically relevant behaviours, and the successful therapist needs to be able to recognise and use these. Among the examples they give are:

● The time structure of sessions. A person constantly coming late to sessions may be avoiding discussing difficult issues, whereas someone finding it hard to leave at the end of sessions may be excessively dependent on the therapist.

● For some clients, termination of therapy creates concern about independence and reliance on the therapist, and may relate to grief about previous losses, separations or even deaths.

● Expressing affect. Some people avoid showing their feelings because they do not want to seem even weaker

than their coming for therapy seems to imply. This sometimes leads to clients trying to avoid situations which might involve showing affect, such as changing the subject and talking endlessly in great detail about tangential topics. Occasionally, some clients may deliberately use anger and tears to attempt to control the behaviour of the therapist.

● Therapist characteristics. Process analysis in psychotherapy suggests that coping models are more effective than expert models, and therapists who appear to be extremely competent at dealing with their lives may be less effective with their clients than those who share some of the problems of the client. For example, the obviously fit and thin therapist may have some difficulties in dealing with clients whose problems concern a sedentary lifestyle and obesity.

● Therapists' feelings. All therapists have feelings about clients, and it is worth examining whether these feelings are related to the client's problems. For example, the client who induces boredom in the therapist may be exhibiting clinically relevant behaviours; one might ask whether the client is behaving in a way that induces similar feelings in others. Obviously, therapists would be sympathetic and diplomatic in discussing this with a client, and in some circumstances doing so would be a powerful therapeutic tool.

The essence of functional analytic psychotherapy is contextualism, which is a term recently invoked to describe how behaviour analysts see the context of behaviour as having central importance (cf. Cullen, 1991, for examples of other contextualist approaches). In his Presidential Address to the American Association for the Advancement of Behaviour Therapy Neil Jacobson expresses it thus:

> The goal of a contextualist … is to bring [the] client into contact with contingencies that will strengthen … desirable behaviour.… [T]he artistry of psychotherapy comes in the innovative ways that therapists create such contact. Unfortunately behaviour therapy has become rule-governed. When behaviour is controlled by rules, following the rule is reinforced … [t]hese re-inforcers are not readily available outside the therapist's office.
>
> It is far preferable to avoid the problem … by not creating change based on rules, but instead bring the client into contact with naturally reinforcing contingencies from the beginning. (Jacobson, 1997, p.440.)

Above all, then, avoiding rule-governance in therapy is about the art and creativity of being a psychotherapist.
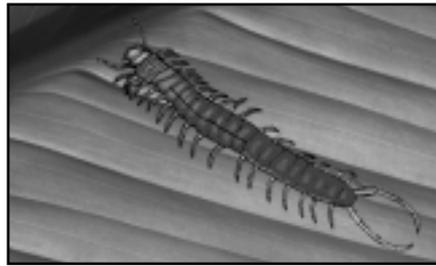
Centipede doing the pearly glide

I have dedicated my Presidential Address to the memory of Mary Last, my first supervisor when I entered clinical training. Mary died suddenly and unexpectedly as I was working on this address. She was a unique individual who was an artist when it came to therapy with children. She was an excellent psychotherapist and behaviour analyst who first had a sense of how to conduct good therapy before she bothered to describe it. Much of her behaviour was contingency-shaped rather than rule-governed.

On one occasion, early in my training, she made it clear to me in her usual gentle way, that I needed to watch her carefully, because it was obvious that I knew nothing about children. We were working with babies with poor muscle tone. She and a quite remarkable nurse, whom we all knew as Sister Pom, were showing me a procedure which involved holding the baby tightly with its limbs close into its body. The baby — naturally — protested and cried loudly at such an intervention. Sister Pom felt for any small movement in the baby's limbs before releasing it. Over time, she expected more and more movement from the baby before she would let go. Eventually, this resulted in a strengthening of the limbs and an increase in muscle tone.

I was watching carefully (following the rule Mary had given me), and noted that this was a perfect example of negative reinforcement and shaping successive approximations. With barely a glance in my direction, Mary said, 'Yes, Chris, I'm sure it is.'

Daring to let go

Much of what I am saying is scary. It feels risky to relax control and give ownership to individuals or groups. Semler (1994, p.96) observed: 'A turtle may live for hundreds of years because it is well protected by its shell, but it only moves forward when it sticks out its head.' I am suggesting that, frightening as it might appear to be, it would be more productive if we considered carefully those rules which we need and those we do not. Trust people to be in charge of their own behaviour.

There is a children's song I first heard from The Singing Kettle, a popular trio of children's entertainers in Scotland. They

relate the tale of the Kirkcudbright centipede, who is renowned as an excellent dancer. However, Jenny Longlegs is jealous of her dancing and, wanting to find out how she could weave such magic, she watches the centipede and writes down exactly what she does:

> *Leg number 94 gave 95 a shunt,*
> *Legs numbers 1 and 2 were twisting out in front,*
> *Legs numbers 9 and 10 were wriggling up the side,*
> *73 and 74 were doing the pearly glide.*

Unfortunately, when she tried to follow these rules, Jenny Longlegs herself had little success, so she persuaded the centipede to show her how she did it by following the written instructions. This had disastrous consequences:

> *Her hundred legs were twisted,*
> *She got tied up in a fankle,*
> *She fractured 7 shin bones,*
> *14 knee-caps and an ankle.*

At the end of the song, the centipede sorely proclaims: 'never try an explanation of what comes naturally'.

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A full version of this Address is available from the author.