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Birth, Ritalin, Prozac, Viagra, Death

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The Changing Face of Nervousness

There was a general consensus throughout the 20th century through to 1980 that the most common forms of nervous problems found in the community were best seen as forms of anxiety. Where doctors turned to pharmacotherapy, it was to reach for a sedative and later a tranquilliser. Until the 1960s the treatment of these nervous states was relatively uncontroversial, but with the rise of antipsychiatry these nervous states became a battleground.

Allied to the rise of neuroscience, the advent of the third Diagnostic & Statistical Manual (DSM-III) in 1980 appeared to many to confer a legitimacy on psychiatry that it had previously lacked, and the treatment of nervous problems appeared to move into less ideological and less contested waters. PET scans and other techniques appeared to attest to the reality of mental illness rather than just the existence of brains. But 25 years later there is growing concern at the increasing medicalisation of nervous problems and doubts as to how science based this actually is (Healy, 2004).

Where DSM-III proposed a general reorganisation of the classification system within psychiatry, it also proposed specific changes in the classification of anxiety. The new classification rules were described dismissively at the time as a Chinese laundry approach to psychiatry – take two symptoms from column A, two from column B and two from column C. In the

case of anxiety, DSM-III broke up what had been a monolithic entity into a number of discrete disorders such as panic disorder, Obsessive-Compulsive Disorder (OCD), social phobia, Post-Traumatic Stress Disorder (PTSD) and Generalised Anxiety Disorder (GAD) (Healy, 1997).

The impact of these new DSM categories and the marketing of new drugs on the experience of nervous problems can be seen most clearly in the case of panic disorder. Up to the mid-1980s, the average patient presenting with anxiety described periods of feeling tense and stressed, and indicated that these states of dysphoria would last between half an hour to two or three hours. By the end of the 1980s, one of the commonest complaints of patients was that they had panic attacks – a term rarely heard of before 1980. When asked how long these attacks might last, sufferers would typically suggest half an hour to two or three hours. This transformation occurred even though by definition panic attacks last for one to two minutes, and rarely much longer.

Underpinning the transformation in terms that people used to express or account for their dysphoria lay the fact that in the 1980s, the Upjohn pharmaceutical company sought to market a new drug alprazolam (Xanax). Upjohn put alprazolam into clinical trials for one of the conditions newly recognised by DSM III – panic disorder. First described by Donald Klein in the mid-1960s, the perception was that panic disorder was a severe form of anxiety and the hope was that demonstrating that alprazolam worked for this condition would lead to it displacing other benzodiazepines from the marketplace. In the course of their development work for alprazolam, Upjohn sponsored scientific symposia on panic disorder, often in exotic locations, to which they brought some of the most distinguished figures in psychiatry. The company supported a burgeoning literature on panic attacks and a range of clinical and marketing studies on this disorder (Healy, 1990). When finally launched, adverts for the new drug featured Panic even more prominently than Xanax. Sales of Xanax followed this marketing of Panic, despite the fact that, even in Upjohn supported trials, panic disorder responded less convincingly to alprazolam than to comparators such as imipramine.

Quite aside from an increase of sales to and through psychiatrists, television, radio, and newspaper editors and journalists, from the BBC to CNN to ABC, and from the *Times* and *Guardian* to the *New York Times*, *Washington Post* and *Sydney Morning Herald* became aware of interest in this new disorder. This led to programs and articles featuring panic attacks. Even though many of these programs and articles recommended behaviour therapy as the appropriate treatment rather than drug treatment, the net result of media exposure was that the way patients understood and expressed their experiences changed, and the way physicians viewed those experiences, also changed. This was true even in Britain, where Xanax never became widely available. Pharmaceutical funding strategically placed in academia had leveraged a much wider change in consciousness in society generally.

There is more than a simple change of labels for personal experiences involved here. The term panic in the late 1980s connoted a disturbance of biology, where anxiety neurosis had indicated a psychosocial problem best managed by non-drug means. Quite aside from the true nature of the problems and their most appropriate treatment, this example of pharmaceutical company marketing gives evidence of a new force at work with capacities to transform some of our most intimate experiences; and there is nothing in the training of psychiatrists that would lead anyone to think they were likely to be aware of what was happening.

In the early 1990s, Roche had hoped to market moclobemide for the treatment of another of this new cluster of disorders – social phobia. In preparation for the launch of moclobemide, Roche commissioned an educational booklet produced, apparently disinterestedly, by a working party of the World Psychiatric Association, aimed at helping clinicians to recognise the features of social phobia. One hundred thousand copies of this were prepared for distribution to clinicians. Moclobemide was eventually only licensed in a small number of markets for social phobia, but the methods of marketing it, which involved selling social phobia have been documented in some detail, and have subsequently been pursued on a much wider scale by Smithkline, the marketers of paroxetine (Paxil/Aropax) (Moynihan and Cassels, 2005). Since then a literature has

burgeoned, and even though much of this recommends non-drug treatments for "shyness", sales for Paxil increase in line with awareness of both shyness and social phobia among physicians and consumers.

What can be seen here is a pattern of disease mongering that can also be seen in the marketing of osteoporosis, leading to hormone replacement therapy or calcium enhancing drugs; or elevated lipid levels, leading to the use of lipid lowering drugs; or erectile dysfunction leading to the use of Viagra; or within the psychiatric domain, the marketing of attention-deficit-hyperactivity-disorder (ADHD) leading to the use of Ritalin, or bipolar disorder leading to the use of so-called "mood-stabilisers".

Within the domain of everyday "nerves", these unfolding events were shaped by an earlier set of developments. In the mid-1980s, the benzodiazepine group of tranquilliser drugs, of which Valium, Librium, and Ativan were among the best known, were linked with the production of physical dependence (Healy 1997). Concerns about benzodiazepines dependence rapidly escalated into a crisis that helped establish health as both an item of news and an object of study within the social sciences.

In the late 1980s, the first of the new drugs acting on the serotonin system, buspirone, was marketed as a non-dependence producing tranquilliser. This failed in the market-place, and in so doing helped push the next generation of serotonergic drugs down an antidepressant development route. The idea of a non-dependence producing tranquilliser had no credibility in the market place, whereas antidepressants were not thought to be dependence-producing. The selective serotonin reuptake inhibitors (SSRIs) became antidepressants, and it was predictable even then that companies would seek to branch out from the beachhead of depression into the hinterlands of anxiety (Healy, 1991).

In the West, cases that would have been treated by Valium and Ativan were being converted into cases to be treated by Prozac and Zoloft and Paxil. This situation is reflected in data on pharmaceutical sales, which show clearly that sales of antidepressants soared in the UK and the US through the 1990s while sales of tranquillisers flattened and dropped, so that by

the middle of the 1990s the sales of the antidepressants had overtaken those of the tranquillisers (Rose, 2003). The overall volume of sales of drug treatments for nervousness remains however approximately constant, which indicates that what is involved at least in part is not a detection of new cases of depression but a transformation of cases of anxiety into cases of depression.

This switch did not happen in Japan, where benzodiazepine dependence had never become a crisis. The Japanese pharmaceutical market is a high volume market with many features in common with Western pharmaceutical markets. In both Japan and the West, the antidepressant market had been a much smaller one than the tranquilliser market through the 1980s. For every person put on an antidepressant, three or four were put on tranquillisers. In Japan, this distribution of sales continued: the market for tranquillisers remained robust through the 1990s, while sales of antidepressants remained what they had been during the 1980s. There were no SSRIs on the Japanese market until 1999, when fluvoxamine was licensed for the combination of OCD and depression. In 2000, paroxetine was licensed for the combination of social phobia and depression. Neither Prozac nor Zoloft ever made it to the Japanese market. Far from being anomalous, the Japanese were closer to the global norm. It was the UK and US that proved the exception. Figures from South America and elsewhere during this period show comparable trends to those found in Japan (Rose, 2003).

The move from anxiety to depression can be seen in a different form in advertisements for antidepressants and tranquillisers during the period. The images of nervous problems from the 1960s through to the late 1980s showed young to middle-aged women, in good health after treatment with tranquillisers. In contrast, the image of depression during this period was of older women, and occasionally older men. Depression was a relatively rare disorder of middle-aged or older people. In the 1990s, the women featured in advertisements for SSRI antidepressants – such as those for Lilly's Prozac, Solvay's Luvox and Glaxo SmithKline's Paxil/Aropax – become progressively younger; by the late 1990s these women appear to be in their mid-20s.

By the mid-1990s, patients presenting with nervous problems typically talked about problems with their mood. When asked how long these problems might last, it was common to have patients say the problem might last for half an hour to several hours. This by definition is not a classical mood disorder, which involves a pervasive and persistent abnormality of mood, a dysthymia, lasting typically for several months, but at the very least for several weeks.

Whether these conditions are appropriately called mood or anxiety disorders is immaterial. The problem that patients experienced as anxiety in the mid-1970s or early 1980s was transmuted first of all into panic attacks, and is now more likely to be called a mood disorder. Where aspects of the experience tied into physiological changes may remain constant, and may differ between anxiety and depression, it seems likely that a diagnosis of depression will demoralise, whereas a diagnosis of anxiety will lead to anxiety about being anxious. In so far as this happens, these changes of label seem capable of affecting significant parts of the overall experience that is anxiety or depression.

There are further aspects to this. Even though drugs were used in its treatment, as mentioned, anxiety up through to the 1980s had been seen primarily as a psychological problem, and a slew of psychodynamic terms linked to its psychological management had penetrated into popular language. Terms such as defence mechanisms, libido and ego were bandied around, commonly divorced from their theoretical frames of reference. This psychobabble had consequences for notions of legal and moral responsibility, as well as for child rearing and educational practices. By 1997, however, the front page of the G2 section of the *Guardian*, one of Britain's leading liberal broadsheets, featured the image of a depressive thinker agonising over the fact that Britain had become so depressed. On the inside the author wonders whether the British have become a low serotonin people (James, 1997). The psychobabble is rapidly being replaced by a biobabble that equally has pervasive consequences for the ways we view and experience ourselves and not just for the labels we give to our discontents.

By 1996, the World Health Organisation (WHO) had reported that depression was the second greatest source of

disability on the planet (Murray and Lopez, 1996). The response from psychiatry to this news appeared to be satisfaction that the discipline was now the second most important in medicine after cardiology. Nobody seemed to question how a society could have become so depressed so fast. Depression was being touted as a serious illness; but the emergence of a comparable epidemic of any other serious illness on this scale would have led to serious questioning as to what had happened. There appeared to be no such questioning in the case of depression.

Brand New Psychiatry

What we see here is the development of a new corporate psychiatry whose marketing has availed of the use of brands, a weakening of patent laws, an industrialisation of the clinical trial process, the willingness of physicians to be sold diseases and their inability to manage uncertainty. But above all it has been aided by physician ignorance of marketing.

Pharmaceutical brands stem from the late 19th century when the German company, Kalle, took out a copyright on the trade name Antifebrin for a new antipyretic agent that they could not patent. The power of brands can be seen from the success of Aspirin and Heroin a few years later, that continue to have much greater recognition than their generic compounds (Healy, 1997).

Companies brand more than the name of drugs. For instance, although only shown to have effects on mania, the adverts for Depakote referred to it as a mood-stabiliser. Had Abbott referred to Depakote as prophylactic for bipolar disorder, the FDA would have declared the adverts illegal. The term mood-stabiliser, while connoting prophylaxis, was essentially meaningless and as such not subject to legal action (Healy, 2006a). Since the launch of Depakote in 1995, over a hundred articles a year have had the term mood-stabiliser in their titles or abstracts; textbooks carry chapters on the group of mood-stabilisers, and physicians include mood-stabilisers along with antidepressants and antipsychotics as a major psychotropic group. There seems almost no recognition that the term is little more than an advertising rubric that did not exist before 1995.

In a similar fashion, academic clinicians and others refer to venlafaxine and other agents as serotonin and norepinephrine reuptake inhibitors (SNRIs), as though this term has a clinical or pharmacological meaning, unaware of the extensive market testing that weeded out alternative acronyms and settled on this brand.

Two developments in the patent system made an increased focus on brands possible. First in the 1960s, older laws enabling companies to take out process patents were phased out, so that only one company could have a fluoxetine, making a blockbuster Prozac possible. As a consequence, companies have a much greater incentive to aggressively defend and conceal the hazards of their compounds than before (Healy, 2004).

Second, where the patent system once aimed at rewarding substantial novelty that clearly contributed to public utility, the system has moved toward rewarding even trivial novelty with diminishing regard for evidence of benefit. Thus Abbott gained a patent on semisodium valproate for mania even though sodium valproate had already been demonstrated to be useful for mania. Lilly were enabled to get a patent on olanzapine on the basis that it was less likely to produce elevations of cholesterol and triglycerides in dogs compared to ethyl-flumepazine, a finding that is dramatically at odds with its effects in man. More generally, unable to develop new antidepressants, companies have resorted to patenting isomers of parent compounds and to date no such patents have been overturned.

A third factor has been that companies gained control of clinical trials in the 1980s, when clinical research organisations (CROs) took over from academic physicians as the organisers of trials. As of 2000, CROs ran more than two-thirds of clinical trials undertaken by industry, worth $30 billion (Davies, 2001; Getz and De Bruin, 2000). Privatised research of this sort is profoundly different to previous clinical research. CROs have transformed human subjects research, restructured controls of disclosure and confidentiality, and managed intellectual property in an entirely new way. RCT [explain?] data collected by CROs is more clearly proprietary than when a federation of academic centres conducted trials.

CROs provide a privatised IRB system (ethics review) that grants ethical approval to company studies, when university centres might not (Lemmens and Freedman, 2000). CROs have made it possible to move trials on drugs for Western markets into Asia or Africa, in a way that university departments could not have done (Petryna, 2006). Whether this move has been prompted by concerns to avoid regulatory oversight, or cost considerations is less clear. Even in trials done in Western settings, it is now clear that CRO-run psychotropic trials have included bogus patients (Healy, 2004).

But of perhaps even greater importance is a fourth factor, namely, that companies now control the production of the scientific literature. In the case of drugs on patent, a significant proportion of the trials undertaken that do not return the right result now remain unpublished, while a majority of those published are in all probability ghost-written, and bear an ambiguous relationship with their underlying data (Healy and Cattell, 2003).

The changing authorship of trials was first noticed in the mid-1990s. In response journals tightened up their authorship criteria. At this point there was little hint that the great majority of company trials appearing in major journals might be ghost-written. But by 2000, 75 per cent of the RCTs appearing in major journals like the *Journal of the American Medical Association*, the *New England Journal of Medicine a*nd the *Lancet* were sponsored by pharmaceutical companies, and it now seems unlikely that companies would have been prepared to leave the preparation of any sizeable proportion of these key marketing tools in academic hands. The picture that emerges is of an academic medicine transformed from what it had been during the 1960s.

The difficulties are best symbolised by the paediatric SSRI trials, where we have the greatest known divide in medicine between the raw data on an issue on the one side and the published accounts purporting to represent those data on the other. The data can now be seen to indicate that the drugs do not convincingly work and are hazardous, but prior to the release of the data the scientific literature universally portrayed these agents as safe and effective (Healy, 2006b).

One of these trials, study 329 on paroxetine, offers a landmark for the point at which science turned into marketing.

An internal company assessment of this trial in 1998 had concluded that this and another study had shown paroxetine did not work for children but that it would not be commercially acceptable to publicise this finding. Instead the positive findings from the study would be published; they were in an article whose authorship line contains some of the best-known names in psychopharmacology (Keller, Ryan, Strober et al, 2001).

There has been a recent sense of crisis about the clinical trial literature. But this has not led us to address the processes that gave rise to the divide outlined above, which must be assumed to be ongoing and producing comparable divides elsewhere in psychiatry and medicine. Instead, the focus has been on whether authors declare their conflicting interests. This focus must look good to marketing departments who would prefer the field to think that our problems stem from a few corrupt academics rather than from company practices that restrict access to data while still claiming the moral high ground of science.

The irrelevance of conflicting interests can be seen from a consideration of the process of guideline creation. Recent guidelines for schizophrenia and for bipolar disorder that have been drawn up by experts funded by industry do not differ from independent guidelines (Healy 2006b; 2007). The process by which industry has captured guidelines lies not in payments to experts but rather in ensuring the published clinical trial evidence on which they are based can only permit one conclusion. Even independent guidelines for schizophrenia and bipolar disorder now advocate using on-patent agents rather than older generic agents, although FDA and other regulators, who have seen the raw data, have made it clear it would be illegal for companies to make claims of superiority for newer over older agents.

But as companies have realised for some time, the regulators do not regulate academics. And guidelines drawn up by independent academics are now among the most powerful marketing tools that pharmaceutical companies have.

Part of the power in guidelines appears to stem from clinical discomfort with uncertainty, and psychiatry's perennial concerns about its status as a science. Trials in which drugs barely beat placebo on rating scale measures are read as

evidence that drugs "work", when philosophically it would be more accurate to state that in fact these trials offer evidence that it is simply not possible to say the drug does nothing and that most of whatever benefit there is stems from non-specific factors (Healy, 2007). The emergence of trial results indicating that drugs do something but it is uncertain just what those benefits are should, almost by definition, have marked the point at which scientific investigation of the drugs began, not the point at which independent scrutiny of the drugs in fact has finished. Is there a population within the clinical trial cohort that shows a more substantial response to this specific agent? Given that these drugs are clearly not nosolytic, what functional changes do these agents bring about that may be beneficial for some and what light do any functional changes there may be shed on the constitution of psychosyndromes?

In fact the clinicians who use these drugs know very little about what the drugs do and who benefits, and they are unable to force companies to undertake the research clearly called for. This situation of uncertainty leaves them vulnerable to the apparent certainties offered by guidelines. Although regulators have refused to endorse claims that newer agents are superior to older agents, clinicians inhabit a world in which the academics involved in constructing guidelines dispel any qualms they might have about using their favourite brands in preference to less expensive and possibly more effective agents.

Control of the scientific literature and the clinical trial process has enabled companies to monger diseases (Moynihan and Cassels, 2005). Disorders such as social phobia, panic disorder, and depression have been sold in the expectation that sales would follow (Healy, 1997). Epidemiological research that establishes how many people might potentially meet criteria for particular conditions provides some of the most valuable data for this disease mongering, as Michael Shepherd, the founder of psychiatric epidemiology, has noted ruefully (Shepherd, 1998).

This selling of disorders has gone hand in hand with a marketing of risk and fear. Early hints of depression must be detected and treated in order to reduce the risks of suicide, alcoholism, divorce, and career failure and treatment must continue to reduce the risk of relapse. Where treatment of a disease might mandate treating one person per hundred, with

treatment stopping once the condition responds, treatment of those at risk of a disease or its consequences mandates the treatment of one in 10, and has no natural stopping point (Heath, 2006).

But there is more to disease mongering than this. Physicians have always been able to prescribe antidepressants for minors. The significance of company efforts to seek licences for SSRIs for paediatric depression did not therefore lie in the opportunities such licensing might have opened up for the recognition and treatment of neglected disorders. Licences to market SSRIs for adolescent depression would have marked the point at which companies were enabled to convert the vicissitudes of childhood and adolescence into disorders to be treated rather than any enabling of physicians.

Company marketing is less and less about spreading recognition of established disorders and increasingly about pathologising vicissitudes. A licence for Viagra, for instance, became a means for companies to question young men with normal sex lives as to whether things couldn't be better. Any of life's vicissitudes are now grist to the marketing mill, and companies with a licence do not baulk at changing our understanding of what it means to be human, if it captures a niche for the product. There are no academics drawing this to wider attention, perhaps because physicians in general fail to understand where disease mongering comes from.

Brand Fascism[1]

The opportunities to focus on brands linked to changes in patent law, a greater ease in getting patents, and an increasing control of the means of knowledge production from the 1970s onwards, set against psychiatry's internal uncertainties, have enabled pharmaceutical companies to refashion psychiatry (and much of medicine). Where once scientists and clinicians, including those linked to companies, thought about medicine and molecules in scientific and clinical terms, they have been edged out by marketers who see molecules as pawns in a game of capturing

1 The term brand fascism was coined by Kalf Applbaum, author of *The Marketing Era* (2004).

market niches. The shift has been subtle and all but imperceptible from the outside, but it has become the driving force in all that companies now do (Applbaum, 2004).

At the heart of events is the failure of physicians to understand modern marketing. Despite regular surveys from marketing companies about the properties of a desirable antidepressant or antipsychotic, and despite the participation of clinical academics in opinion leader (focus) groups, clinicians confuse marketing with the trinkets, free lunches, lecture fees, and trips to conferences, sponsored by company sales departments. They fail to see that they are the source of the knowledge that goes into creating brands and fail to see their role in virally transmitting new brands. The actual differences between modern antidepressants and modern antipsychotics are minimal; the perceived differences come almost entirely from sophisticated consumer research aimed at understanding what physicians might swallow.

In this process, academics have three roles. First, as repositories of psychiatric knowledge their role is to help companies understand what the average clinician might perceive as a development. Second as opinion leaders they help deliver the company message to non-academic clinicians. Third, they lend their names to ornament the authorship lines of journal articles and programs of academic meetings reporting the results of the most recent company studies.

These academic meetings have come to resemble political rallies, where the faithful assemble to hear about the evils to be vanquished and the new methods to do this. It has been some time since a trace of uncertainty entered into any of our major meetings, even though we are living through a profound medical crisis in that the health of our patients is worsening (Colton and Manderscheid, 2006) and there is open debate about the corruption of our science by companies (Angell, 2005; Kassirer, 2005). The adverse effects of psychotropic agents are only aired if it suits the marketing interests of some company. Meanwhile companies have commandeered most of our platforms and journal space to present their products under the banner of science, while flouting the basic norms of science – to make data publicly available.

In the past Stalin earned the epithet of The Engineer of Human Souls on the basis of his ability to shape the way people thought; now the market leads patients to queue up to confess their bipolarity or whatever is au courant. Nothing is inconceivable – not even the diagnosis of bipolar disorder in utero (Healy, 2006a).

The market arranges for the formerly independent voices of physicians to be silenced by the una duce, una voce process of guidelines. Of course guidelines state that they are not law, but any commentary on whether one must adhere to them makes it clear that any deviations without justification dramatically increase the medico-legal risks of practice (Healy, 2007). And the element of coercion may soon increase with payments being linked to guideline adherence.

The market arranges for critics of current products to be marginalised or silenced. Anyone who criticises a brand is likely to have "friends" planted in the audience to monitor what they say and if need be challenge it; is likely to have their utterances or writings scrutinised for possible legal actions; is likely to have "friends" and colleagues interrogated about their personal lives; is likely to find "friends" complain them to whatever body monitors their registration as a physician; and is at risk of losing their job (Thompson, Baird and Downie, 2001; Blumsohn, 2006; Healy, 2006c).

Aside from specific career threatening moves, some of the most powerful public relations companies on earth will take on the more general task of discrediting the critic and reversing their influence. The methods include cancelling meetings where the critic has been invited to speak (Fugh-Berman, 2006), planting hostile reviews of any books they might write, and spreading the word that this person is trouble (Healy, 2004). Added to this are difficulties with even major journals that might be thought impervious to company influence. Fearful of industry, even the most distinguished journals in the field faced with critical articles accepted by the peer review process may hold these articles up in their legal departments for years.

It seems as if a handful of shrewd advisors and marketers have been able to take advantage of the immense marketing power of pharmaceutical companies, to infect academia and health care with an academic immune-deficiency virus (AIV).

The defence reactions that might have been expected from prestigious journals and professional bodies in response to the virus seem to be paralysed. Quite the contrary the virus seems to have been able to subvert normal defences to its own purposes. These defences have reacted almost as though it was their programmed duty to shield a few fragile companies from the malignant attentions of pharmacovigilantes.

Ways Forward?

Just as everything was crumbling behind the rhetoric of Stalinism, so also there is good evidence that outcomes within mental health are deteriorating. While the absolute numbers of patients occupying beds in asylums began to fall in the 1950s, the numbers of both voluntary and involuntary admissions per annum has been rising steadily since then. In North Wales, for instance, there has been a 15-fold rise in mental health admissions since the 1940s; compulsory detentions into mental illness units have risen three-fold; admissions for serious mental illness have risen seven-fold (Healy, Savage, Michael et al, 2001). Rates of suicide for patients with schizophrenia have increased over 10-fold (Healy, Harris, Tranter et al, 2006), and general mortality for serious mental illness has increased (Healy, Harris, Cattell et al, 2005). The picture in North Wales is mirrored widely. Uniquely, among major illnesses in the Western world, the life expectancy for patients with serious mental illness appears to be declining (Colton and Manderscheid, 2006).

While changing social expectations and other social factors play some role in these deteriorating outcomes, nevertheless this profile is inconceivable against the background of current rhetoric that endorses the practice of evidence based medicine with the latest and the best treatments. The physical treatments we use and the way services are organised around those treatments cannot but play some part in these outcomes. What we are seeing now is not what happens when treatments work; it is not what happened to the dementia paralytica services after the discovery of penicillin.

Given an increasing company focus on life style markets rather than on treatments for serious diseases either in the West or elsewhere, one option might be to attempt to separate a more

traditional medical market from an enhancement market, with a variety of physicians, but perhaps psychiatrists in particular, having to choose between being doctors or life style engineers.

Another way forward lies in the recognition that drugs are not made in company laboratories – chemicals are. In order for a drug to come into being, two things have to happen. First, healthy volunteers and later patients in clinical trials agree to take these chemicals to see what happens. Willingness to participate in these studies was born out of the global calamity of World War, when conditions of scarcity mandated the development of the first controlled trials. We participated on the basis that taking risks might injure us but would benefit a community that included our friends, relatives and children. We did so for free. At first this worked and extended the compass of human freedom from the epidemics and other scourges to which our ancestors had been subject for millennia.

But now this data freely given is sequestered by corporations who market selected parts of it back to us under the banner of science. This business model has made these corporations the most profitable on the planet. This model however, at least within psychiatry, is one that demonstrably jeopardises the health and wellbeing of our friends, relatives and children.

Secondly, companies take the inner aspirations and fears of both patients and psychiatrists to transform a chemical into a drug and also to mould a strategy designed to get patients to consume drugs more faithfully than they would do if they were living in a totalitarian regime and were ordered to consume. This is what branding and patenting is about. It yields the biggest profit margins in history, significant amounts of which go to ensuring a continuing hold on academic minds, and through academics, the public mind.

There are both ethical and scientific grounds to object. It is not clear that companies own the data of clinical trials other than by *force majeure*. Whether they do or not, it is time for clinicians to consider whether it is ethical to enter their patients into such "exercises". The consent form should at the very least contain an explicit statement that the company may sequester any data from the trial, rendering it unavailable for scientific

use. It is unlikely that patients currently entering trials know this, or would accept involvement in trials on this basis.

The scientific grounds to object lie in the fact that current academic practices breach the norms of science by not making data available. If we are to be scientific we must object. This can only be good for both psychiatry and companies in that a psychopharmacology of the sort we now have will inevitably be sterile and is only capable of rescue by the serendipitous discovery of new agents.