



Drugs that work

Pharmaceuticals and performance self-management

Helen Keane

Psychoactive drugs have a complex and unstable status in contemporary culture. On one hand illicit drugs are believed to possess a unique ability to disable the user's self-control and thereby destroy physical, psychological and social well-being. On the other hand, the development, marketing and supply of a growing array of commodified psychoactive pharmaceuticals is a central activity of biomedicine and one of the most profitable sectors of global capitalism. As pharmaceutical consumers we rely on chemical effects to maintain our functioning as productive and healthy citizens, usually without being stigmatised as dependent drug users. This is despite the fact that substances on opposite sides of the dangerous drugs/beneficial medication divide frequently share common chemical structures, modes of action and psychoactive effects.

At the same time as the use of a wide range of pharmaceuticals has become normalised and domesticated, anxiety about the reliance of modern societies on chemical solutions has grown.¹ Within the general unease about the over-medication of society, psychoactive pharmaceutical drugs are the focus of particular anxiety. Publicity about problems of abuse and addiction seem almost inevitably to follow the adoption of a new medication. In addition, the mood-altering, cognitive and behavioural effects of psychopharmaceuticals are seen as potentially altering the self, raising ethical and personal questions about enhancement and identity.² As Emily Martin has

observed, psychotropic pills are a *pharmakon*, a Greek term that means both 'remedy' and 'poison'. The meanings attached to their effects are both positive and negative, but this ambivalence does not prevent their consumption on a massive scale.³

One of the most productive ways of thinking about the pharmaceuticalisation of everyday life is through Nikolas Rose's notion of biological citizenship. Rose argues that as a result of the biotechnological advances of the past fifty years we have become 'somatic individuals', subjects who understand and judge ourselves, our actions, our rights and our obligations in biomedical terms.⁴ Crucially, though, twenty-first-century styles of medical thought move beyond a concern with health and disease to the goal of optimisation. As biological citizens we are enjoined to monitor, manage and maximise our physiological and neuropsychological assets. The workplace is a key site for the elaboration of such projects of self-maximisation, a site where somatic individualism coalesces with the related ideals of entrepreneurialism and self-government.⁵ As Colin Gordon has argued, the enterprising self is imagined as fundamentally manipulable, an agent 'who is perpetually responsive to modifications in its environment' and continually engaged in 'reconstructing his or her human capital'.⁶ The intensified and accelerated work demands of the global economy, the emphasis on 'cognitive capacity' as 'the essential productive resource' and the model of enterprising biomedical selfhood encourage practices of pharmaceutical self-management.⁷ Conversely, pharmaceuticals are both materially and discursively constructed to respond to the desires and needs of such responsive agents.

Of course, the use of psychoactive drugs to enhance work performance is neither new nor unusual. Caffeine and nicotine are enmeshed in the routines of office life, even in the era of the smoke-free workplace. In occupations with unusually extreme physical and mental demands, stronger stimulants such as amphetamines have been used to overcome fatigue, aid concentration and allow extended periods without sleep. On the other hand, drug and alcohol use are usually seen as antithetical to the self-control, seriousness and attentiveness required at work. As Gusfield has observed, industrial societies make a clear and oppositional distinction between leisure and work.⁸ Because drinking and drug use mark the time frame of play, freedom and spontaneity, they are violations of the norms of work. The oppositional relationship between work and drugs is also seen in the assumption that work performance is one of the inevitable casualties of drug use. 'Failure to fulfil major role obligations at work' is one of the diagnostic criteria for substance abuse.⁹

In the United States, the eradication of drug and alcohol use in the workplace was one of the goals of the 'war against drugs'. The Drugfree Workplace Act 1988 led to widespread implementation of drug testing programs

that aimed to identify and punish drug-positive employees. While couched as a reasonable response to the hazards and costs of workforce drug use, drug-free workplace policies can also be seen as a form of disciplinary surveillance that extends management gaze into the private and leisure time activities of employees.¹⁰ As critics have pointed out, the standard tests do not measure intoxication or impairment; rather they screen for traces of past drug use through hair analysis.

Thus psychoactive drugs such as stimulants continue to have a suspect status in the workplace, even when they are medically prescribed. In addition, the notion of drugs as unnatural and harmful chemicals that suppress the authentic self and prevent the achievement of genuine health remains powerful and acts as a limit to the desire for biotechnologised self-enhancement. This chapter focuses on two cases that reveal the role of pharmaceuticals as mediators of the responsible, productive and self-managing worker while also demonstrating the ambivalent meanings attached to these drugs. The first case examines the constitution of sleep as a management issue and the concomitant construction of 'new generation' sleeping pills as restorative of enterprise and agency. The expert literature on sleep is a burgeoning field.¹¹ This case is based on analyses of articles on sleep disorders from medical and management journals; newspaper and magazine articles about sleep problems and their treatment; the information found on the websites of such organisations as the US National Sleep Foundation; and publicity material produced by pharmaceutical companies that market sleep medications. Medicalised sleep discourse legitimates the use of drugs as a rational response to a debilitating health problem, but also produces a counter-discourse of risks and adverse effects.

The second case focuses on the use of stimulant and other medications by adults diagnosed with Attention Deficit Hyperactivity Disorder (ADHD). Here the discussion draws on analyses of medical literature on ADHD, especially that which focuses on the role of executive function, and popular texts that played a major role in the publicising of adult ADHD. These texts are supplemented with data from a study of posts to a large and active online ADHD support forum. Adult ADHD has achieved medical legitimacy as a valid disorder, but it remains controversial in part because of suspicions about the use of stimulants as performance-enhancing drugs. Popular ADHD texts tend to reinforce these suspicions by presenting stimulant medications as an optional self-help tool for ambitious professionals. But posts to the online forum challenge the idea that ADHD treatment is a straightforward route to performance enhancement. Forum members do rely on medication in order to function in the workplace and eloquently acknowledge its benefits, yet their accounts of medicated selfhood are also full of ambivalence and struggle. The negotiation of dosages and brands, side effects, erratic results,

tolerance and drug interactions make pharmaceutical self-management a demanding form of embodied labour, a burden and an obligation as well as an aid and entitlement.

Pharmaceutical self-government: Sleep and wake enhancement

In the new economic order characterised by globalised and deregulated markets, rapid information flows, competition and privatisation, the demands made on workers in many different industries and occupations have intensified.¹² Discourses of productivity and flexibility construct a regulatory ideal of an adaptable, alert, multitasking worker who is able to maintain attention and focus while calmly responding to heterogeneous demands and sources of information. At the same time the discourses of enterprise and excellence that have flourished in neoliberal economies emphasise the continual improvement of work performance, assessed through processes of formal performance appraisal.¹³ One consequence of these trends is the problematisation and medicalisation of traits that interfere with optimum performance and efficiency.

A noteworthy example is sleepiness at work, previously understood as a relatively minor and private affliction. Lack of sleep now receives extensive attention as a costly public health problem and urgent issue for corporate management.¹⁴ Sleep ‘has a major impact on how well a business functions’, states a recent article in a management journal. ‘Poor sleep costs businesses directly through lost productivity, compromised physical or emotional health, impaired cognition, accident rates and absences and indirectly through factors such as poor morale, poor social relationships, and depression.’¹⁵ The authors construct the sleepy worker as a deficient and dangerous subject; prone to flawed judgement and poor decisions, lacking motivation, slow to learn new tasks and at high risk of accidents and illness. The sleepy worker not only loses his or her entrepreneurial drive but also compromises the enterprise of the corporation and of the nation through losses in efficiency and increases in costs. While the article urges businesses to promote a culture that values sleep and to adopt policies such as limiting the workday (to no more than 12–16 hours!), the notion that workers are themselves responsible for ensuring they get sufficient sleep is also prominent. Individuals are urged to practise good ‘sleep hygiene’ and to be vigilant in detecting sleep disorders that might require treatment. The demands of the workplace thus encroach into the bedroom, and sleep itself becomes a duty and a skill that must be competently mastered in order to guarantee alert wakefulness on the job.

In focus**Insomnia**

Insomnia, defined as difficulty in falling or staying asleep, and more expansively described as poor-quality, insufficient or non-restorative sleep, is the most common sleep disorder. In publications such as the *Journal of Clinical Sleep Medicine*, the proliferating expert discourse on sleep constructs insomnia as a highly prevalent, chronic, underdiagnosed and undertreated disorder.^a Insomnia is said to affect up to 40 per cent of adults, with 15 per cent suffering chronic sleep difficulties.^b Websites of such organisations as the American Sleep Association and the American Academy of Sleep Medicine transmit medicalised sleep discourse to the general public, and encourage readers to take their sleep difficulties seriously as medical issues with harmful consequences both physical and psychological. Talking to a doctor followed by specialist testing is recommended for those experiencing problems.

a Roth, 'Insomnia'.

b Ringdahl, Pereira & Delzell, 'Treatment of primary insomnia', p. 212.

The standard medical advice recommends trying behavioural techniques, such as relaxation and cognitive therapies, before turning to medication, but medication is the most common treatment.¹⁶ The market for hypnotics or sleeping pills has expanded dramatically in the past 10 to 15 years because of the development and aggressive marketing of new agents such as zopiclone and zolpidem, sold under brand names that include Lunesta, Imovane, Ambien and Sonata. Prescriptions have grown particularly rapidly among people younger than 45.¹⁷ Pharmaceutical company Sepracor states in its 2005 annual report: 'Since the introduction of LUNESTA, the prescription sedative hypnotic market has progressed from year-over-year growth rates of 5 to 7 per cent to 28 per cent as of the week of February 24, 2006.'¹⁸ In a similar pattern to the construction of SSRI anti-depressants as cleaner, smarter, safer and more scientific than earlier anti-depressants, the so-called Z-drugs are given a positive and modern image through comparison with benzodiazepam hypnotics such as Valium and Xanax. Unlike these old-fashioned sleeping pills, which knocked you out and left you hungover, depressed and possibly addicted, the 'new generation' drugs 'act only on specific receptors in your brain that are focused on sleep', have a low risk of dependence and do not produce morning grogginess.¹⁹ Hence, according to Sepracor, physicians have developed a 'greater level of comfort in prescribing sleep medications'.²⁰

The story of 'How I Faced Reality', originally found on the Ambien CR website, provides a vivid example of how the Z-drug hypnotics mesh with the desire of enterprising individuals to act on themselves to become 'the best they can be'. Ambien CR, an extended release version of zolpidem, is claimed by manufacturer Sanofi-aventis to have a unique combination of

sleep-inducing and sleep-maintaining properties. The story is told in first person by Alice, 35 (who, the small print tells us 'is not an actual patient'):

I've always been a go-getter. When it comes to my career, I like to give 100 per cent. But when my sleep problems started to affect me in the office, I felt powerless. Nothing seemed to help and I've never really been one for taking sleeping pills. Sleep is supposed to be natural, right? Well, I finally caved in and talked to my doctor. He soon made me realize that when sleep can't happen naturally, there's no point in suffering. Now I take AMBIEN CR when I need to. I sleep much better. I can concentrate better. And at work, I'm back to my 100 per cent and can concentrate on the day ahead.²¹

The accompanying image is of a slim, professionally dressed woman, standing face-on and smiling directly at the viewer. Behind her is an image of the same woman at work, smiling confidently and making a presentation to a business meeting (we can see the laptop and backs of two suited colleagues at the table). Alice's story does more than highlight the ability of Ambien CR to restore sleep and hence work performance. It is a conversion narrative in which taking the medication is itself a demonstration of agency. Before Ambien, Alice is powerless not only because she is sleep deprived and unable to perform at the office but also because her outdated beliefs about sleeping pills prevent her from taking steps to solve her problem. Despite being a 'go-getter', she believes that poor sleep is something that can only be endured. After Ambien, Alice is restored to full efficiency. Not only is she back to 100 per cent at work but also her identity as agentic 'go-getter' has itself been extended to include rational pharmaceutical self-management.

However, Alice's rhetorical question 'Sleep is supposed to be natural, right?' remains salient despite her conversion to neurochemical selfhood. The unnatural and uncanny properties of medication-induced sleep have been highlighted in the well-publicised stories of 'bizarre' nocturnal behaviour linked to the Z drugs. Reports of people walking, eating, having sex, making phone calls, doing housework and home repairs and even driving in their sleep after talking Ambien and other Z drugs prompted the US Food and Drug Administration to insist that manufacturers include stronger warnings on patient information.²² While 'nocturnal wandering' on Ambien appears to be rare, its occurrence complicates the drug's relationship to sleep, as such activity is difficult to reconcile with the ideal of 'natural sleep' that 'restores your mind and body'.²³ The Ambien CR website itself reveals the darker side of zolpidem as a psychoactive *pharmakon* in the page devoted to side effects. As well as listing headaches, somnolence and dizziness as common side effects, it tells users that they 'should be aware that sleep medication may cause memory problems, tolerance, dependence, withdrawal, changes in behavior and thinking, and issues concerning pregnancy'. Because of the risks of tolerance and dependence it advises that 'Sleep medicines should, in most cases,

be used only for short periods of time, such as one or two days and generally no longer than one or two weeks'. It warns that 'Withdrawal symptoms may occur when sleep medicines are stopped suddenly', that these may occur after only short term use and that 'rebound insomnia' is one of the possible withdrawal effects. Here on the mandatory warning page, the new and improved sleeping pill appears to be not so different from its predecessors. And while the positive effects of the drugs are distributed among a range of beneficiaries beyond the sleep-disordered individual, the negative effects are confined to the embodied experience of the pharmaceuticalised subject.

Adult ADHD: Underperformance and impairment

Another category of pharmaceuticals used both legally and illicitly to improve work performance are the stimulants methylphenidate and amphetamine, most commonly prescribed for the treatment of Attention Deficit Hyperactivity Disorder (ADHD). The spread of stimulant therapy from the schoolroom to the workplace occurred as a result of the reconfiguration of ADHD as a disorder that produced impairment in adults as well as behavioural problems in children. Until the mid-1980s ADHD was understood as fundamentally a disorder of childhood. In the DSM-IV, published in 1994 and revised in 2000, a positive diagnosis requires that the symptoms exhibit before the age of seven. The descriptions of symptomatic behaviour assumes a school-aged subject: he or she 'often fails to finish schoolwork', 'often leaves seat in classroom', 'often blurts out answers'.²⁴

The issue of ADHD in adults first emerged in follow-up studies of diagnosed children, which suggested that symptoms frequently persisted into adulthood. But in the early 1990s a new group of 'ADHD adults' gained visibility, those seeking diagnosis *as* adults. Popular texts such as *Driven to Distraction* raised the profile of the disorder, and parents began self-referring to clinics after their children were diagnosed with the condition.²⁵ Medical publications on adult ADHD constructed an under-treated population suffering from 'clinically significant impairment' and demonstrating characteristic inattentiveness, impulsivity and restlessness.²⁶

In the most comprehensive text on adult ADHD, pre-eminent authority Russell Barkley and co-authors state that ADHD is 'a relatively common mental disorder in adults, affecting at least 5% of the US adult population'.²⁷ According to dominant medical discourse and patient advocacy groups, ADHD has clearly been established as a 'lifespan disorder'. However, the nature and validity of the condition remains contested.²⁸ For critics, the expansion of ADHD is a vivid example of the process of medicalisation and the elasticity of medical diagnoses, especially psychiatric diagnoses.²⁹

The treatment of ADHD in adults has followed the protocols established for children. Stimulant drugs such as methylphenidate (e.g. Ritalin, Concerta) and amphetamine (e.g. Adderall) are the most commonly prescribed.³⁰ Adults are a lucrative growth market for ADHD medications. Prescriptions for 'people 19 years of age or older' of eight commonly used ADHD drugs increased by 90 per cent in the United States from 2002 to 2005. In 2006 it was reported that adults received about a third of all prescriptions for these drugs.³¹ Although there is currently little research on the long-term effects of stimulant therapy on adults, pharmacological treatment is presented as particularly suitable for adults because they must manage their symptoms in a workplace setting. Taking a medication, especially a long-acting medication, is 'more convenient, effective and private' than behavioural treatment in this context.³² The establishment and institutionalisation of adult ADHD thus produces a new form of 'pharmaceutical personhood' in which stimulants are incorporated into the production of the normal self from early childhood onwards.

As older ADHD medications such as Adderall and Ritalin come off patent and become available in generic versions, drug companies are marketing new formulations specifically to adults. A notable example is Vyvanse, an amphetamine 'pro-drug', which was approved for adult use in 2008.³³ Vyvanse is promoted as longer lasting than traditional formulations and therefore especially suited to adults who face the demands of a long working day. Shire, the company that developed Vyvanse, funded a 'simulated workplace environment study' in which subjects 'engaged in tests and activities that require a level of attention needed in many workplace settings'.³⁴ The finding that Vyvanse was effective in improving performance for up to 14 hours after administration was widely publicised and featured in an advertising campaign for the drug. The advertisements emphasised productivity and improved work performance as the outcomes of treatment. They featured brightly coloured images of adults posing with successfully completed projects: an executive with a Powerpoint display, an architect with a model of an impressive high-rise building, a dressmaker with a dress labelled SOLD and a cabinetmaker in a new kitchen.

Given the emphasis of popular adult ADHD texts on the hidden struggles of successful professionals and the broadness of the self-screening tests they promote, it is not surprising to find scepticism about the validity of the condition in public discourse. Stimulants improve concentration, memory and performance of problem solving tasks in individuals whether or not they have been diagnosed with ADHD. Thus, the dramatic rise in ADHD diagnoses and growth in prescriptions for stimulants can readily be interpreted as an example of neurocognitive enhancement, the use of psychopharmaceuticals by healthy individuals to improve functioning.³⁵ However, medical and psychological research challenges the discourse of adult ADHD as performance

enhancement. In their major study of adults with ADHD, Barkley, Murphy & Fischer produce a comprehensive picture of 'impairment in major life activities' including education, work, finances and personal relationships.³⁶ Specific associations with ADHD include lower job status, more job losses and higher rates of substance use, risky driving, criminal activity, imprisonment and divorce. While such associations do not prove causality nor even the validity of the condition, they do point to a group of people suffering significant disadvantage and adversity. The struggle of living with ADHD as an adult is also vividly represented in the discussions found on the ADHD forums and support groups that are flourishing online.

Pharmaceutical self-management on the ADHD forum

The ADHD forum is a large and active online community with tens of thousands of members from several countries.³⁷ Most areas of the forum can be freely accessed, but posting requires registration. Some members are newly diagnosed or undiagnosed, others are veterans of long-term treatment. Members share personal experiences; ask for and give advice, sympathy and (rarely) criticism; reflect on the nature of their condition; and 'vent' about life with ADHD and the lack of understanding shown by 'normies' and society as a whole. Forum posts made between mid-2006 and mid-2010 related to work, career and medication were reviewed and analysed as part of a larger project on medicalisation.

Employment and its frustrations is one of the recurring themes of discussion. Members often wrote eloquently about the experiences of being reprimanded by a boss, of being classified as an underperformer and of being fired from jobs 'even though I always try my very best'. They linked their work problems closely to their symptoms of distractibility, disorganisation, difficulty completing tasks and poor awareness of time but also bemoaned the lack of freedom they were given to utilise their strengths and adopt the unconventional work styles that they felt would improve their productivity. Members frequently constructed themselves and other 'ADHDers' as fundamentally out of step with the norms and expectations of the average workplace. Several posts highlighted the discouragement produced by job advertisements, which inevitably seemed to list qualities opposite to those produced by the 'ADHD brain': 'self-starter', 'disciplined', 'punctual', 'organised' and 'independent worker with good follow-through'.

Indeed, the currently dominant theory of ADHD does present a vision of the ADHD subject as one who is uniquely ill-equipped to achieve the ideals of the productive worker as defined by discourses of enterprise and performance management. Developed by Russell Barkley, this theory posits ADHD as a deficit in executive function, the cognitive system often described as

analogous to the conductor of an orchestra or the chief executive of a corporation. As the corporate metaphor suggests, the theory of executive function privileges qualities associated with organisation and the efficient achievement of goals. According to Barkley, it is executive function that allows individual behaviour to be controlled by 'hindsight, forethought, time, plans, rules and self-motivating stimuli' that 'ultimately provide for the maximisation of future net outcomes'. Conversely, the deficiencies produced by ADHD result in difficulties with 'goal-directed' persistence and produce an inability to maintain performance towards a task in the face of ordinary levels of distraction.³⁸

While resisting this exclusively negative view of ADHD as a list of incapacities, forum members frequently described being overwhelmed by panic and stress when faced with an ever-increasing pile of unfinished work, constant emails and conflicting demands. One poster described having to work two to three times harder than her colleagues just to keep up, while another described arriving at work one to two hours early in a vain attempt to get a head start. Medication helped by improving focus and removing distracting thoughts, thereby transforming work from 'torture' to 'almost bearable'.

Medication was discussed extensively on the ADHD forum, with each brand of drug having a dedicated subforum. On threads addressing the general topic of the difference medication had made to their lives, members often described their 'meds' with gratitude if not affection, as transformative substances that had enabled a move from chaos and despair to a relatively normal life. However, in the context of discussions focused on work, medication was spoken about in more instrumental and qualified terms. One member bluntly stated that 'in order to make a living, I have to take Adderall', while another commented that 'with a high enough dose of medication I can cope with this job'. In this context, medication was constituted as an entitlement but not one that provided any form of reward or advantage. In reply to questions from 'newbies' worried about stimulants showing up on workplace drug tests, members pointed out that people with ADHD had as much right to effective treatment as diabetics had to insulin. Medication was not a 'magic bullet', but it was necessary for those 'with a clinically diagnosed handicap'.

But as well as being a right, taking medication was constituted in some posts as a burden, an imposition and a risk, even when the drugs themselves were beneficial. In these posts, members voiced concern about the long-term health effects of stimulants and expressed hopes of being able to manage their symptoms 'meds-free' one day. Less frequently, members expressed resentment that in order to be 'acceptable', 'normal' and to live up to other people's standards they had to suppress or lose part of themselves. One described a nagging unease resulting from not being able to distinguish between 'what is part of me and what is just the meds'.

An ambivalent relationship with medication was, however, most strongly expressed in the numerous threads that detailed members' pharmacotherapeutic regimes, past and present. Long periods of trial and error 'cycling through meds' were the norm, with one member stating that it had taken her 15 years to work out which medications worked for her. This process of 'working out' is often a gruelling form of embodied labour focused on the identification and balancing of symptoms, positive effects, adverse effects and drug interactions. High hopes about a new medication were often disappointed. Dealing with side effects, such as dizziness, rapid heartbeat and excess sweating at work, could be as distressing as dealing with the symptoms of ADHD, especially for those who had not disclosed their diagnosis. The problem of tolerance, the gradual loss of efficacy of a previously effective medication, was another common complication. Because of the proliferation of ADHD medications – brand and generic drugs, stimulants and non-stimulants, sustained release and immediate release, high dose and low dose – the range of different combinations that can be tried is immense. Members sought advice on 'the best drug for inattentiveness' or 'a stim which won't make me angry and hostile', but the varied and contradictory replies to such queries demonstrated that the response of a particular body to a particular drug at a particular time could not be determined in advance.

Medication histories such as the following were not unusual:

- Vyvanse: No effect except insomnia
- Strattera: Some improvement but feeling drowsy and depressed
- Concerta: Only lasted a few hours, made me irritable and had a terrible crash
- Adderall: No serious side effects but dose needed to be doubled in order to work all day.

Many ADHD forum members were managing complex poly-drug regimes that incorporated several different kinds of medication, including anti-depressants, anti-anxiety drugs, hypnotics, sedatives and anti-psychotics. Adults with ADHD are frequently diagnosed with 'co-morbidities' such as depression and anxiety, but as several posters observed it was almost impossible to work out whether a symptom, such as panic attacks, was a side effect of a medication or the result of an underlying condition. In other cases drugs, such as SSRI anti-depressants, which were prescribed to help with the anxiety caused by stimulants, also reduced the desired effects of the stimulant. See-sawing back and forth in an attempt to find a stable balance between stimulant and sedative effects was time-consuming, costly and frustrating.

The experiences with medication described on the forum are not claimed to be representative. Problems are much more likely to be posted than success stories and those experiencing good results without complications are less

likely to seek advice or support. However, the posts do demonstrate that as ‘technologies of the self’ ADHD medications are not quick, clean or easy routes to enhancement. Rather the messiness of the interactions between drugs, bodies and selves meant that, for many forum members, a normal level of functioning was a hard-won and fragile achievement that could not be taken for granted but required daily vigilance. As well as being required in order to perform successfully as a worker, regimes of medication are themselves a form of work.

Conclusion

Psychoactive drugs have a long history as enhancers of work performance. This chapter has argued that the intensification of work demands, the rise of cognitive capacity as the most valued human resource and the prevalence of biomedical styles of thought have constituted pharmaceutical self-management as an attribute of the responsible worker. The possibilities of cognitive enhancement through smart pills produce excited speculation about a future where individuals will attain extraordinary abilities whenever required.³⁹ But the two examples discussed in this chapter present more everyday examples of pharmaceutical self-management at work. In the first, medical and management discourses combine to constitute somnolence as a major threat to the optimum functioning of individuals and corporations. The availability of a ‘new generation’ of sleeping pills allows the sleepy and underperforming worker to return to full capacity. In the second, workers diagnosed with ADHD are handicapped by the distractibility, disorganisation and temporal anomalies of the ‘ADHD brain’. Stimulant medications, marketed to the relatively new target group of ‘adults with ADHD’, provide the clarity and focus required to make it through a demanding working day.

The cases demonstrate that biological citizenship is a varied and unevenly distributed phenomenon, even among those who depend on psychopharmaceuticals. The treatment of insomnia with hypnotic sedatives rarely involves the construction of a biomedicalised identity based on the malfunctioning brain. In Alice’s Ambien story there is no diagnosis or mention of aetiology – there is simply a glitch to be fixed. In contrast, being diagnosed as an adult with ADHD usually involves a reconfiguring of the self as a neurological subject, one whose behaviour and experiences are linked directly to an idiosyncratic brain. Moreover, embarking on stimulant therapy requires reflection on the blurry boundaries between self, symptom and drug effect. As the posts to the ADHD forum demonstrate, this form of pharmaceutical self-management is an ambivalent experience that highlights the positive and negative sides of the *pharmakon*. Medication was viewed as life-saving

and life-transforming, but the good effects were achieved through an often gruelling, messy and open-ended process of trial and error. Moreover, the unpredictability of drug effects when substances are ingested by actual bodies means that the promise of a clean and efficient elimination of symptoms is rarely fulfilled.

Notes

- 1 Fox & Ward, 'Pharma in the bedroom . . . and the kitchen'; Williams, Gabe & Davis, 'The sociology of pharmaceuticals'.
- 2 Kramer, *Listening to Prozac*.
- 3 Martin, 'The pharmaceutical person', p. 274.
- 4 Rose, *The Politics of Life Itself*.
- 5 Du Gay, Salaman & Rees, 'The conduct of management and the management of conduct'; Rose, 'Governing the enterprising self'.
- 6 Cited in Du Gay, Salaman & Rees, 'The conduct of management and the management of conduct', p. 269.
- 7 Bernardi, 'Schizo-economy', p. 76.
- 8 Gusfield, 'Passage to play'.
- 9 American Psychiatric Association, *DSM-IV-TR*, p. 199.
- 10 Warren & Wray-Bliss, 'Workforce drug testing'.
- 11 Kroll-Smith & Gunter, 'Governing sleepiness'.
- 12 Green, 'Why has work effort become more intense?'; Webb, 'Organizations, self-identities and the new economy'.
- 13 Billett & Pavlova, 'Learning through working life'.
- 14 Kroll-Smith & Gunter, 'Governing sleepiness'; Williams, 'Vulnerable/dangerous bodies?'
- 15 Gaultney & Collins-McNeil, 'Lack of sleep in the workplace', p. 132.
- 16 National Sleep Foundation, 'Sleep aids and insomnia'.
- 17 Gellene, 'Sleeping pill use grows as economy keeps people up at night'.
- 18 Sepracor, *Sepracor 2005 Annual Report*, p. 2.
- 19 Indeed Rozerem, one of a new class of sleep drugs that target melatonin receptors, is claimed to have zero side effects (Shaw, 'When counting sheep fails').
- 20 Sepracor, *Sepracor 2005 Annual Report*, p. 2.
- 21 Ambien CR, 'How I faced reality'. The Ambien CR website no longer features images and stories of ambien users, but simply reproduces the prescribing information required by the US Food and Drug Authority. For Alice's story, see Mack, 'Alice, 35, is not a real Ambien CR patient'.
- 22 Khamisi, 'Sleep medication linked to bizarre behavior'; US Food and Drug Administration, 'FDA requests label change for all sleep disorder drug products'.
- 23 Mayo Clinic, 'Insomnia treatment'.
- 24 American Psychiatric Association, *DSM-IV-TR*, p. 92.
- 25 Hallowell & Ratey, *Driven to Distraction*.
- 26 Faraone, Biederman, Spencer et al., 'Attention-deficit/hyperactivity disorder in adults'.
- 27 Barkley, Murphy & Fischer, *ADHD in Adults*, p. 25.
- 28 Zwi & York, 'Attention Deficit Hyperactivity Disorder in adults'.
- 29 Conrad, *The Medicalization of Society*.
- 30 Dodson, 'Pharmacotherapy of adult ADHD'.
- 31 Okie, 'ADHD in adults', p. 2638. Okie notes that these drugs are sometimes prescribed for indications other than ADHD.

- 32 Barkley, Murphy & Fischer, *ADHD in Adults*, p. 457.
- 33 A pro-drug is a drug that is administered in an inactive form, and only becomes activated once metabolised in the body.
- 34 E!Science News, 'Vyvanse CII provided significant efficacy at 14 hours in adults with ADHD'.
- 35 Conrad, *The Medicalization of Society*; Greely, Sahakian, Harris et al., 'Towards responsible use of cognitive enhancing drugs by the healthy'.
- 36 Barkley, Murphy & Fischer, *ADHD in Adults*.
- 37 To protect the privacy and anonymity of members the forum is not named and references to specific posts are not made. The quotes and examples are fictionalised composites based on actual posts. Due to the size of the group and the high activity level of the forums, threads and posts tend to repeat similar themes and experiences.
- 38 Barkley, 'Behavioral inhibition, sustained attention, and executive functions', pp. 75, 67, 77.
- 39 Hall, 'The quest for a smart pill'.

References

- Ambien, C.R. (n.d.). 'How I Faced Reality'. Retrieved 15 July 2010. www.ambienr.com/treating-sleep-problems.aspx.
- American Psychiatric Association (2000). *DSM-IV-TR: Diagnostic and Statistical Manual of Mental Disorders* (4th edn). Washington DC: American Psychiatric Association.
- Barkley, R.A. (1997). Behavioral inhibition, sustained attention, and executive functions: Constructing a unifying theory of ADHD. *Psychological Bulletin*, 121(1): 65–94.
- Barkley, R.A., Murphy, K.R., & Fischer, M. (2008). *ADHD in Adults: What the Science Says*. New York & London: Guilford Press.
- Bernardi, F. (2007). Schizo-Economy. *SubStance*, 36(1): 76–85.
- Billett, S., & Pavlova, M. (2005). Learning through working life: Self and individuals' agentic action. *International Journal of Lifelong Education*, 24(3): 195–211.
- Conrad, P. (2007). *The Medicalization of Society: On the Transformation of Human Conditions into Treatable Disorders*. Baltimore, MD: Johns Hopkins University Press.
- Dodson, W.W. (2005). Pharmacotherapy of adult ADHD. *Journal of Clinical Psychology*, 61(5): 589–606.
- Du Gay, P., Salaman G., & Rees, B. (1996). The conduct of management and the management of conduct: Contemporary managerial discourse and the constitution of the 'competent' manager. *Journal of Management Studies*, 33(3): 263–82.
- E!Science News (2009). Vyvanse CII provided significant efficacy at 14 hours in adults with ADHD. Retrieved 22 March 2011. <http://esciencenews.com/articles/2009/07/01/vyvanse.cii.provided.significant.efficacy.14.hours.adults.with.adhd>.
- Faraone, S., Biederman, J., Spencer, T., et al. (2000). Attention-deficit/hyperactivity disorder in adults: An overview. *Biological Psychiatry*, 48(1): 9–20.
- Fox, N.J., & Ward, K. (2008). Pharma in the bedroom . . . and the kitchen: The pharmaceuticalisation of daily life. *Sociology of Health and Illness*, 30(6): 856–68.
- Gaultney, J.F., & Collins-McNeil, J. (2009). Lack of sleep in the workplace: What the psychologist-manager should know about sleep. *Psychologist-Manager Journal*, 12(2): 132–48.

- Gellene, D. (2009). Sleeping pill use grows as economy keeps people up at night. *Los Angeles Times*, 30 March. Retrieved 31 March 2011. <http://articles.latimes.com/2009/mar/30/health/he-sleep30>.
- Greely, H., Sahakian, B., Harris, J., et al. (2008). Towards responsible use of cognitive enhancing drugs by the healthy. *Nature*, 456: 702–5.
- Green, F. (2004). Why has work effort become more intense? *Industrial Relations*, 43(4): 709–41.
- Gusfield, J. (1987). Passage to play: Rituals of drinking in American society. In M. Douglas (ed.), *Constructive Drinking*. Cambridge: Cambridge University Press.
- Hall, S. (2003). The quest for a smart pill. *Scientific American*, 289(3): 54–7.
- Hallowell, E.M., & Ratey, J.J. (1994). *Driven to Distraction*. New York: Touchstone.
- Khamsi, R. (2007). Sleep medication linked to bizarre behavior. *New Scientist*. 6 February. Retrieved 19 July 2010. www.newscientist.com/article/dn11115-sleep-medication-linked-to-bizarre-behaviour.html.
- Kramer, P. (1994). *Listening to Prozac*. New York: Penguin.
- Kroll-Smith, S., & Gunter, V. (2005). Governing sleepiness: Somnolent bodies, discourse and liquid modernity. *Sociological Inquiry*, 75(3): 346–71.
- Mack, J. (2008). 'Alice, 35, is not a real Ambien CR patient'. Retrieved 31 March 2011. <http://pharmamktng.blogspot.com/2008/10/alice-35-is-not-real-ambien-cr-patient.html>.
- Martin, E. (2006). The pharmaceutical person. *BioSocieties*, 1(3): 273–87.
- Mayo Clinic (2009). Insomnia treatment: Cognitive behavioral therapy instead of sleeping pills. Retrieved 19 July 2010. www.mayoclinic.com/health/insomnia-treatment/SL00013.
- National Sleep Foundation (2009). Sleep aids and insomnia. Retrieved 17 July 2010. www.sleepfoundation.org/article/sleep-related-problems/sleep-aids-and-insomnia.
- Okie, S. (2006). ADHD in adults. *New England Journal of Medicine*, 354(25): 2637–41.
- Ringdahl, E.N., Pereira, S.L., & Delzell, J.E. (2004). Treatment of primary insomnia. *Journal of the American Board of Family Practice*, 17(3): 212–19.
- Rose, N. (1992). Governing the enterprising self. In P. Heelas & P. Morris (eds). *The Values of the Enterprise Culture* (pp. 141–64). London: Routledge.
- (2007). *The Politics of Life Itself*. Princeton, NJ: Princeton University Press.
- Roth, T. (2007). Insomnia: Definition, prevalence, etiology and consequences. *Journal of Clinical Sleep Medicine*, 3(5 Suppl): S7–S10.
- Sepracor Inc. (2006). *Sepracor 2005 Annual Report*. Retrieved 22 March 2011. www.corporatewindow.com/annuals/sepr05/cover.html.
- Shaw, G. (2007). When counting sheep fails: The latest sleep medications. Retrieved 22 March 2011. www.webmd.com/sleep-disorders/guide/to-sleep-perchance-to-sleep-soundly.
- US Food and Drug Administration (2007). FDA requests label change for all sleep disorder drug products. Retrieved 22 March 2011. www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/2007/ucm108868.htm.
- Warren, S., & Wray-Bliss, E. (2009). Workforce drug testing: A critique and reframing. *New Technology, Work and Employment*, 24(2): 163–76.
- Webb, J. (2004). Organizations, self-identities and the new economy. *Sociology*, 38(4): 719–38.

- Williams, S., Gabe, J., & Davis, P. (2008). The sociology of pharmaceuticals: Progress and prospects. *Sociology of Health and Illness*, 30(6): 813–24.
- Williams, S.J. (2007). Vulnerable/dangerous bodies? The trials and tribulations of sleep. *Sociological Review*, 55(1): 142–55.
- Zwi, M., & York, A. (2004). Attention Deficit Hyperactivity Disorder in adults: Validity unknown. *Advances in Psychiatric Treatment*, 10: 248–59.