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"This paper considers the relocation of clinical trials and human subject experimentation to China as a key site for examining the evolving fortunes of Chinese and North-American neo-liberalism. Beginning with the premise that neo-liberalism as a mode of capitalism oscillates between the imperatives of labour fluidity and incarceration, it considers the history of clinical trials, imprisonment and regulation in the US as the necessary context for understanding the recent rush to off-shoring. What can we deduce about the trends towards social and economic reform in China, where a strikingly state-planned, indeed eugenic, approach to public health, is coupled with a dramatic restructuring of the health system, every bit as radical as that pursued by Reagan and his successors in the United States? In this paper, I seek to understand drug and body experimentation as practices that characterise both neo-liberal accumulation strategies and an anti-disciplinarian politics of health. In other words, if the will to experiment has become a distinguishing trait of contemporary capitalism, it is also much more than that. Keeping in mind the slogan of AIDS activists in the nineties, who claimed that "clinical trials are health care too", I will be interested in some of the tensions that are arising in China around the politics of infectious disease, sex and drug use."

Experimental Life

The power of Hans-Jörg Rheinberger's work on the philosophy of science lies in his rigorous distinction between the testing device, which produces standards or replicas and legitimates prediction, and the experimental system, which is creative only inasmuch as it periodically disrupts the regularities of the test and generates events of an entirely unanticipated nature. The unanticipated event is not the result of subjective error but is on the contrary entirely objective, real, indeed realer than real (S245-S246). It eludes prediction and yet this doesn't mean that it results from some kind of Deus ex machina or act of God. On the contrary, it is from within the very fabric of the experimental protocol, its provisional habits, network of relations and stabilities, that the destabilizing event is able to emerge.

Rheinberger is interested in the biological sciences in general. Nevertheless, I want to suggest that there is something unique to the bio*medical* experiment, something that further complicates its relation to the unanticipated event. The testing of a new pharmacological compound, a biological device or tissue, cannot only occur in vitro – it must also be performed in vivo. It needs to be ingested, metabolized and lived-with, in order to prove its eventfulness. In this way, biomedical experiment is always a self-experiment, even when carried out en masse: a transformation of

body and mind whose effects will always remain a little bit incalculable, whatever the precautions taken. In the long run we're all dead. There is thus an interesting tension between the imperatives of standardization and safety that allow a drug to become marketable and the incalculable edge of experience—where the event comes into being. Without a doubt we owe much of our present-day pharmacopoeia to the willingness of scientists and other experimenters to ingest the results of their own curiosity, sometimes with fatal consequences.[1] There is a long and fascinating history of scientific self-experimentation, but it exists in an uneasy relationship with the present-day norms of clinical practice. The randomized clinical trial, an experimental system designed to iron out the unexpected, is one way the modern, post World War II pharmaceutical industry has been able to forge a certain scientific and industrial respectability. The use of suitably compliant testing populations—detainees in the American state prison system—has been another, less respectable way of standardizing the procedures of clinical experiment, while perhaps allowing for a certain "creativity" in the protocols of experiment. Is this space of unconfined experiment the dirty secret of pharmacological invention? And what happens when this space is regulated out of existence? At least one commentator and insider of the pharmaceutical industry has suggested that the ethical regulation of clinical trials should be held partly responsible for the dramatic decrease in real pharmacological invention over the last few decades (this comes from a commentator who is extremely critical of the politics of the drug industry) (Pignarre 2003).

The tension between incarceral and voluntary experience, objective and subjective science, self-experiment and rationalized torture, is recurrent in the history of science. But it is particularly salient in the neo-liberal era, where the marketing of drugs is so closely tied to the promise of heightened experience and the desire for positive self-transformation—enhancement as a literal surplus of life.[2] When compared with the norms of pharmacological reason that preceded it, the drug market of the neo-liberal era is much more attuned to the *desire* for self-experiment than the imperatives of inhibition and social control. Indeed, it could be argued that the drug market, like any other area of neo-liberal production, has internalized into its accumulation strategies the demands for autonomous self-experiment articulated by the social movements of the sixties and the seventies.[3] As a consequence, the contemporary pharmaceutical industry is faced with the challenge of turning the desire for self-experiment into a form of labour on the one hand and a commodity on the other. This is already a task fraught with problems. How do you channel the sometimes chaotic will to experiment into a form of labour, which implies a certain compliance? And how do you

[1] See Altman (1998).

[2] I'm here thinking of Joseph Dumit's notion of surplus health.

[3] Kane Race (2005) provides a brilliant analysis of this shift in the relationship between recreational drug use and the marketing strategies of the drug industry.

capture the desire for experimental consumption in a marketable form?[4] These problems have only been compounded by the increasingly intense regulation of the clinical trial, drug approval and drug classification process (legal or illegal status of the compound, use and misuse in its consumption) over the same period.

In this paper I develop the concept of the will to experiment as a way of understanding the tensions inherent in the contemporary enterprise of drug production and consumption. The word experiment—derived from the Latin *experiri*—is in itself replete with interesting ambivalences. Not quite subjective and not quite objective, *experiri* means to experience but also to test. Stretching these ambivalences, I want to conceive of the will to experiment as lying at the interface between labour and experience. It is the will to experiment that is put to work in the clinical trial process, when a human subject is required to follow a regime of strictly controlled drug ingestion, self-observation and testing. I thus conceive of clinical trial participation as a form of labour — clinical or experimental labour – in which consumption and production of bodily effects blur together (Waldby and Cooper 2007). But the will to experiment is also much more than a form of labour and is never entirely reducible to the stabilizing procedures of the clinical testing process. Taking my cue from Rheinberger, I want to envisage the will to experiment as a mode of experience that continuously displaces the boundaries of its own formulation. The will to experiment can take the obvious and spectacular form of taking mind-altering drugs, but I prefer to conceive of it as something much more abstract, something as abstract as "desire" (Deleuze and Guattari) or experience (William James), without wanting to make any assumptions about the valence of that desire. Desire can be creative of new relations and stabilities, productive of the unexpected, without being positive, pleasurable or even survivable (Thus, according to Rheinberger, a problem encountered in any experimental system is how to stabilize the unexpected). Moreover, as Rheinberger suggests, the fact that the experimental event is unpredictable doesn't mean that it comes out of nowhere. Rather it can only be generated from within a matrix of provisionally stable connective relations, whose very connection is what gives rise to occasional instabilities. In Rheinberger's words, the experimental event is the result of *conjunctures*; modes of connection that are productive because they destabilize and deterritorialize the normative systems they have brought together. The will to experiment can thus be envisaged as entirely social, without divesting it of any sense of the singular.

In this paper, I will be interested in the contemporary politics of clinical trials as it is being played out on a global level. In particular, I will be investigating the stakes at play in the recent trend towards the offshore outsourcing of clinical research and testing from North America to China. What is motivating this push on the part of the multinational pharmaceutical industry? And what are the implications in terms of the national science and innovation

[4] See again Kane Race (2005) for an insight into this tension in contemporary drug production and consumption.

strategies of both China and the US? How are the politics of clinical trials connected to the market liberalization of health care in both contexts? The will to experiment, I will suggest, is intrinsic to neo-liberal modes of accumulation. Neoliberalism can thus be provisionally characterized as that form of capitalism which most immediately profits from the experimental destabilization of social norms and the mobilities of desire. And yet it constantly comes up against the problem of how to confine, render compliant and valorize the fluidities of social and bodily experiment. In a very concrete way, this tension is visible in the recent history of clinical trial research in the US, where the widespread use of prisoners as clinical labourers has been progressively replaced by a highly flexible, all too uncompliant work force of casualized guinea pigs. I would suggest that the push towards offshore outsourcing of clinical trial research to China is at least partly motivated by the desire to re-discover some of the labour compliance and clinical readability once offered by the US prison-pharma complex. In the meantime however, China itself is undergoing an intense experiment in neo-liberal market reform, which is also producing an extreme social fluidity. In a very real sense, the economic success of reform-era China is crucially dependent on the labour of its floating populations—who also happen to be intensively engaged in the production of new gender, sexual and social relations. The development of a Chinese labour market in clinical research is no exception to these trends. It too draws on the circulation of bodies and desires associated with seasonal migration, rural exodus, communal disintegration, sex work and IV drug consumption. It too, in other words, is interested in capturing some kind of surplus from the experimental destabilization of social connections.

In what follows, I will consider the off-shoring of clinical trials as a key site for examining the evolving fortunes of Chinese and North-American neo-liberalism. Beginning with the premise that neo-liberalism as a mode of capitalism oscillates between the imperatives of social destabilization and incarceration, I will first consider the history of clinical trials, imprisonment and regulation in the US as the necessary context for understanding the recent rush to off-shoring. What can we deduce about the trends towards biopolitical transformation in China, where a strikingly state-planned, indeed eugenic, approach to public health, is coupled with a dramatic restructuring of the health system, every bit as radical as that pursued by Reagan and his successors in the United States? In the process, I seek to understand drug and body experimentation as practices that characterise both neo-liberal accumulation strategies and an anti-disciplinarian politics of health. In other words, if the will to experiment has become a distinguishing trait of contemporary capitalism, it is also much more than that. Keeping in mind the slogan of AIDS activists in the nineties, who claimed that "clinical trials are health care too" (Epstein 1998), I will be interested in some of the tensions that are arising in China around the politics of infectious disease, sex and drug use.

The Prison and the Clinic

We think of the Reagan administration as having initiated the series of reforms that have progressively undermined the redistributive model of public health (or what existed of it) in the US and of simultaneously reorienting life science research along highly commercial, highly privatized lines. But the same period (and earlier) also witnessed a much more hopeful politics of health experimentation—one that mounted a serious critique of the incarceral, authoritarian and punitive dimensions of a social state biopolitics. In their various ways, the civil rights movement, feminism, gay activism and the anti-psychiatry movement were concerned with dismantling the disciplinarian logic of state biomedicine, in order to imagine another practice of health and another sexual politics. At its most interesting, this wasn't an outright rejection of biomedicine but rather a collective intervention into the conditions of the biomedical experiment, the epistemologies of health and medicine, and the pragmatics of health care.[5] It is within the context of these movements that we should situate the growing public scrutiny of state prison research in the US, which up until the late seventies had represented a major source of clinical trial studies for the pharmaceutical industries.

The widespread use of prisoners incarcerated in the US's state prison systems began in earnest during World War II. As so often, it was a state of war that justified the use of uncommon means to initiate scientific progress. With large numbers of troops suffering from infectious diseases on the war front, prisoners were called upon to participate in large-scale drug trials and blood transplant experiments in order to accelerate the development of new cures. The actual conduct of clinical trials, it seems, was envisaged as a practice of total war, pitting the allies against their microbial enemies.[6] The practice, however, was not suspended after World War II and continued to grow steadily throughout the following decades. During the 1960s, an era of intense inventiveness and sales' growth, pharmaceutical companies were conducting the greatest part of clinical trials amongst prison populations, even going so far as to build state-of-the-art clinical trial laboratories on prison grounds. Their concern, it seems, was not only to recruit prisoners as human subjects but also to train prison inmates as clinicians, capable of carrying out tests at a fraction of the cost outside prison walls. The commercial benefits of this move were starkly highlighted in the testimonial of a group of prisoners who brought a lawsuit against the corrections department in 1968, claiming that the companies had obtained hundreds of thousands of dollars of labour for free (Hornblum, 1998: 103). The penal-medical alliance, it seems, was at least partly motivated by changes to the FDA requirement for clinical trials. In 1962, the FDA responded to the thalidomide scandal by requiring three phases of human clinical trials, including Phase I trials on healthy subjects,

[5] This intervention that was perhaps carried furthest by HIV/AIDS activists in the 80s. See Epstein (1998).

[6] See on this point Hornblum 1998: 83.

before a drug could be marketed. This meant that the small number of hospital patients that had hitherto been required for clinical trials was suddenly insufficient. And as Hornblum points out, state-controlled prisons seemed to offer the perfect conditions for both industrial-scale labour and the requirements of standardized clinical experiment—highly regimented, standardized, living conditions, spatial confinement, and a workforce that is "cheap, available and confined," not to mention already highly stratified along class and race lines (Hornblum, 1998: 108).

The use of prisoners as guinea pigs came under increasing scrutiny throughout the seventies, with a spate of damning media exposés, a Senate subcommittee enquiry and a proposed bill seeking to limit the practice, leading to its gradual phasing out. It is only very recently however, in 1981 that the FDA officially outlawed the practice.[7]

In the meantime, the conduct of clinical trials in the US has shifted to a "voluntary" system, which is not without its own forms of control. While drug trials no longer take place within the walls of a state prison, the circumstances that drive a patient to volunteer in a clinical trial and a medical practitioner to undertake contract pharmaceutical work may be no less coercive. Indeed it would seem that the very process of health care liberalization has led to the decline of the prison-based biomedical complex—liberating the experiment from the confines of the state institution—only in order to re-establish its new methods of control in the open, unconfined space of the free market. Jill A. Fisher comments that the current practice of private-clinic based contract research, in which an individual medical practitioner will take on trial contracts on behalf of the pharmaceutical industries, is directly motivated by the effects of neo-liberal reform (2007). As medical practitioners face diminishing revenues, contract work becomes an alternative form of income, while for under- or uninsured patients, clinical trial participation may represent one form of casualized, high-risk labour amongst many others and perhaps the only means of access to health care. This situation is not without problems of its own, even from the point of view of the pharmaceutical industry, which routinely complains about the costs of US-based contract work, the length of time required for recruiting suitable patients, the excessive flexibility of the patients themselves, their unreliability, high drop-out rates, non-compliance and lack of clinical readability.[8] In other words, at the very moment that neo-liberalism vaunts the flexibilities of decentralization, subcontracting and the de-collectivization of labour and its risks, it finds itself confronted with the problem of *excessive*

[7] [Code of Federal Regulations 21, part 50, 44, 'Restrictions on Clinical Investigations Involving Prisoners.'

[8] The pharmaceutical industry literature attributes this lack of clinical readability to an excess exposure to drugs, ie. a lack of treatment naïveté – but I wonder if the latter isn't a euphemism for the exact opposite. In other words I wonder if the problem isn't that the uninsured are *too sick* to be readable. This would make sense of the interest in places like China and Russia, where the demolition of health for all is more recent. But what about India?

flexibility—and how to re-confine it. It would seem that for the pharmaceutical industry, the drive to push the clinical trial process offshore represents one way of resolving this problem—at least in the short term.

Off-shoring the Experiment—The Clinic as Export Labour Zone

In the face of mounting public pressure to reduce the exorbitant price of drugs in the U.S. domestic market (still the world's largest market), there has been a hankering for old methods and a search for new horizons. Throughout the '80s, the pharmaceutical consortiums were heavily involved in lobbying for the enforcement of global IPR laws. More recently, there has been a change in rhetorical tactics. It would seem that the threat to profits no longer lies in unenforced IP but rather in the longueurs of the clinical trial process. The arguments are more or less explicit in their nostalgia for the old, incarceral methods of medical experiment. There have been open calls for a return to prison-based clinical trials. There have also been moves to make the clinical trial process more "flexible"—as flexible, in other words, as the standard North American clinical trial participant (Vastag 2006). But by far the most popular recommendation in recent years has been the offshore outsourcing of clinical trials to destinations such as China, India and Eastern Europe. Off-shoring affects two areas of biomedical R&D--that of scientific and clinical labour, as the costs of employing comparably trained scientists in East Asian countries is significantly lower than in the UK, US and Europe; and that of tissue sourcing, clinical trials and product development (Petryna 2006). Multinational companies have an obvious interest in the pool of high skilled science graduates located in China and India, including an increasing number of Western-trained returnees who are able to perform R&D at much lower costs than their North American counterparts. An even more compelling draw-card, though one not often stated out loud, is the vast number of Chinese and Indian health-care patients who are liable to participate in clinical trials, again at much lower costs than their Western counterparts. The standard insider arguments are quite explicit about their desire for a more compliant patient: off-shoring will open up access to vast pools of patients, many of whom are relatively treatment naïve, often because of a lack of access to health care; recruitment and insurance costs for these patients are much lower than comparable prices in North America; and lack of access to health care will motivate patients to adhere to clinical trial protocols (Kearney 2006). In short, it would seem that off-shoring represents one way for the pharmaceutical industry to re-establish some of the conditions of mass, standardized, low cost trial it no longer finds in the US. In April 2006, pharma companies were performing 838 ongoing trials in the US, 158 in the UK, 81 in Russia, 49 in India and 31 in China (Ernst and Young 2006). The prediction is that EU and US-based multinational pharma companies will double their clinical research activities in developing nations over the next three years, with China and India expected to be the major destinations (Kearney 2006). Most multinational pharma companies have now invested in research ventures in China and India, with small to medium biotech companies look set to follow in their wake (Goodall et al., 2006). Here,

the pharmaceutical/biomed complex seems to be following in the path of manufacturing, software and ITCs, relocating both its standardized labour and R&D to environments where the costs and conditions of human subject recruitment are less onerous. China in particular—much more so than its rival, India—offers the bonus of a highly coercive public health tradition, in many ways reminiscent of the prison-research lab alliance that once existed in the United States.[9]

In many respects, the contemporary Chinese health system continues to bear the imprint of the Maoist era, when massive prevention, immunization and sanitation campaigns were launched to curb the extremely high rates of infectious disease and infant mortality. With the introduction of near total access to basic health care, the Mao era public health system had virtually eradicated smallpox, plague and cholera by 1960. This was by no means a history of linear progress, since considerable setbacks occurred during the Great Leap Forward and the Cultural Revolution. Nevertheless, life expectancy jumped from 35 to 68 years between 1952 and 1982, while infant mortality rates fell from 250 to 40 deaths per 1,000 live births. In many ways, the Maoist approach to public health did not depart significantly from the bio-political methods favoured by European states over the same period—disease control was thus envisaged as a method of total war, engaging the entire population in a rigorous effort of collective discipline and surveillance, and aiming in the long run for the final elimination of the microbial foe. Moreover, Maoist public health included an intense surveillance over cultural and personal norms of conduct. Illegal drug-use and prostitution were targeted as practices to be eliminated. Indeed, it seems that along with the circulation of microbial vectors, human traffic of all kinds—by which I

[9] Clearly, the move towards the outsourcing of clinical and biomedical innovation is not unidirectional. The current global reconfiguration of R&D involves a complex interplay of competitive strategies on the part of both the advanced economies and the emerging economies of India and China. This field of power struggles can be analyzed as much in terms of the competition between the US and the UK, as between the advanced economies and the emerging economies or indeed between China and India (Friedman 2006). Moreover, in a context of globalized scientific practice, it is clear that the interests of many actors – multinational companies; internationally mobile investors and scientists; transnational NGOs -- cut across national and regional boundaries. The rise of China and India as leading high-tech contenders complicates the global dynamics of pharmaceutical/biomedical R&D, science innovation and competition, in ways that remain to be analyzed. For example, while international conflicts around intellectual property have until recently involved a general consensus of developing countries in opposition to the IPR regulations demanded by advanced economies (Drahos and Braithwaite 2002), the rise of emerging innovation economies has considerably modified these dynamics, since it is likely that India and China will avail themselves of international IPR to protect their own pharmaceutical and biotech industries. A similar confluence of interests can be discerned in the case of outsourcing: for while multinational companies are interested in the immediate cost savings to be gained from off-shoring, China and India are taking advantage of relocation to develop their own R&D capacities (Friedland and Gilley 2005). Moreover, while the US and UK have an obvious interest in penetrating the vast patient markets of China and India, the traffic isn't all one way, with many Chinese and Indian research teams attempting to pass approval by the US and European regulatory authorities. In this context of rapidly evolving competition, states can take on a more or less prominent role in financing, fostering and encouraging processes deemed to be advantageous to their domestic industries – encouraging FDI, investing in science education, adopting incentives for private investment, encouraging overseas-trained scientists to return to their native countries and harmonizing regulation in accordance with international standards.

mean China's floating population, the circulation of vagrants, orphans and unaccompanied women—was subject to intense campaigns of re-confinement. By the early 1960s, the PRC claimed to have wiped out prostitution from main land China (it had at least wiped out the most visible, public forms of the practice), a victory it celebrated by closing down all of its research institutes into venereal disease.[10]

In some respects, the spirit of Maoist public health has persisted even into the market-reform era. This is perhaps most visible in the area of reproductive health, where a general ethos of *yousheng* prevails (*yousheng* literally means healthy birth, but is often translated by the English term 'eugenics'). Indeed, it would seem that political decentralization has ushered in an even stricter form of eugenic population control in China, with the introduction of a family planning policy designed to control both the quantity and quality (*renkhou zuzhi*) of newborn children. The burdens of this policy, according to Greenalgh and Winkler, have been disproportionately borne by women, and in particular by rural women, who are deemed to reproduce in "higher quantity and lower quality" than their urban counterparts. In the birth planning campaigns of the 80s and early 90s, medical teams were deployed to villages to carry out en-masse sterilizations in rural villages. In their scale, standardization and incarceral methods, it seems that these punitive interventions into the bodies of the rural poor were carried out along the lines of agricultural mass production. In the words of Greenalgh and Winkler, "…most sterilizations were performed during rushed campaigns, when outside medical teams spent short periods in local areas conducting surgeries en masse, often without adequate facilities, sanitary equipment, or anaesthetic"; "in some times and places, the spaying of pigs was no mere metaphor. Rural women were taken by force, placed in cages, and transported to quasi-public operating areas, where one after another they had their tubes tied or IUDs inserted without anaesthetic" (Greenalgh and Winkler, 2006: 251, 252). In the area of reproductive health, it seems, the transition to a market economy in China has not displaced but rather intensified the selective deployment of a state eugenics. Moreover, the rhetoric of Maoist public health has remained highly visible in the PRC's propaganda campaigns in response to emerging infectious disease outbreaks—as evidenced by the quasi-militaristic propaganda campaign launched after the outbreak of SARS (Sharma 2004).

However, this rhetoric has also been profoundly undermined by one of the most accelerated processes of health-care demolition the world has seen. In the wake of the market-oriented reforms of 1978, the Chinese government proceeded to overhaul its health care system by cutting the state's share in total health expenditure and shifting responsibility onto provincial and local authorities, with their variable capacities for raising tax revenue. The immediate effect of this reform was a growing disparity between poor, rural and industrialized, coastal regions, as the

[10] On these points, see Hsieh (2007).

latter had much greater opportunities for revenue raising. At the same time, as Blumenthal and Hsiao recount, the health care system underwent a process of de facto privatization, to which the central government turned a blind eye (Blumenthal and Hsiao, 2005: 1166-1167). With the sharp reduction in public financing, hospitals were forced to generate their own sources of private income. This shift was in fact facilitated by the government's decision to introduce a system of price regulation, whose intended purpose was to insure a basic level of health care provision. As a consequence of this reform, it was now legal for hospitals to earn extra profits from non-basic health care services such as new drugs, diagnostic tests and high-cost technologies. At the same time, the standardized salary regime for hospital doctors was supplemented by a bonus system calculated on the basis of the doctor's revenue-raising activities. The more new drugs or high-price services a doctor was able to sell, the higher the bonus. Doctors thus find themselves in a position where they have much to gain from delivering non-basic health care.

In all respects, China seems to have pursued the process of neo-liberal health care reform with all the enthusiasm of the US, and with equally catastrophic results. "China's newly privatized health care delivery system suffers from all the problems of its distant U.S. cousin, but more so. Only 29 percent of Chinese people have health insurance, which they now need in order to cover the costs of care. Out-of-pocket expenses accounted for 58 percent of health care spending in China in 2002, as compared with 20 percent in 1978. In a 2001 survey of residents in three representative Chinese provinces, half of the respondents said that they had foregone health care in the previous 12 months because of its cost" (Blumenthal and Hsiao 2005: 1167). The risks generated by the reform-era demolition of health have been borne disproportionately borne by the rural poor, who no longer have access to the collective health care offered by the agricultural communes.[11]

It is only against the background of these reforms that we can understand the growing importance of clinical trial participation as a form of labour in the new Chinese economy. As in the US under Reagan, the Chinese government has shifted its priorities from ensuring a general level of public health to investing in and promoting high-return biomedical services, which will only be available to the wealthiest, insured sectors of the population. This shift is in

[11] Although an estimated 35 percent of the total population lives in urban areas and 65 percent in rural areas, the urban population consumes up to 70 percent of health resources, while the rural population receives only 30 percent. Among rural dwellers, 87 percent pay medical expenses out-of-pocket, with a single visit equaling as much as one year's income in some cases. Data from the National Statistics Bureau of China indicates that in 2003 the per capita income of farmers reached 2,622.22 yuan (US$316.69), barely more than the average hospital bill of 2,236 yuan (US$270.05). A 2003 official national health survey revealed that more than 73 percent of rural patients requiring hospitalization chose not to seek care due to the high cost. On all these points, see Hsieh (2007).

keeping with reform-era China's vision of its future role in the global economy. China is no longer content to play host to off-shored industrial production. It now aspires to compete with the US and EU as an innovation economy and biomedical research is one of the key foci of its high-tech programs (Salter, Cooper and Dickins 2006). Thus at the same time as it has withdrawn from universal health coverage, China has made considerable investments in such experimental areas as stem cell science, genetics and biochips. But this is only one side of China's unique approach to global competition. For it seems that while it is seeking to promote its domestic science laboratories as centres of high-tech innovation and contenders in the world IP market, it is also targeting its poorer populations as potential clinical trial participants and tissue sources—both for domestic and foreign interests. Along with the introduction of personalized bonuses for clinicians, the revenue-raising imperative that now weighs on hospitals makes it highly probable that clinical trials will become an essential source of income for the Chinese biomedical enterprise as a whole—in short, a form of export labour like any other.[12] And as is already the case in the US, the patients who are most likely to volunteer for clinical trials are those who have been left uninsured in the wake of health care reforms—often the same rural migrants who engage in seasonal, low-wage work in the urban centres; the floating population whose high-risk circulation across borders of all kinds is proving so productive for the emerging Chinese economy.

With the relocation of clinical trial service providers to China, it seems that the reform-era clinic is set to play much the same role as an export processing zone, one which seeks to capitalize on the experimental body labour of the poor and uninsured as a means of inserting itself into a global economy of for-profit medical care.[13] Multiple models are emerging for the institutional housing of clinical trials—while most take place in suitably authorized hospitals, some contract research organizations have set up independent centres of their own.[14] Moreover, an alternative model is offered by the illegal, but still flourishing trade in blood products, which operates in much the same way as a make-

[12] The countries which are of particular interest for contract research organizations – China and India – are characterized by vast social inequalities, with highly stratified levels of health access (Greenalgh and Winkler 2005), (Anagnost 2006), (Subramanian 2005). It is highly probable that clinical trial recruitment in these countries will target those sectors of the population who wouldn't otherwise have access to medical treatment. At the same time, plans for the expansion of pharmaceutical markets into China and India are also highly selective: it is expected, for example, that the pharmaceutical companies will target at most 10% of domestic markets, in other words, the percentage of the population covered by health insurance and with adequate funds to purchase patented drugs (Ernst and Young 2006). In the context of overall cutbacks in public health expenditure, due in great part to the effects of neo-liberal oriented market reform, it seems probable that the globalization of pharmaceutical R&D will exacerbate current inequalities.

[13] Of particular interest here is Aihwa Ong's discussion of zoning technologies in reform-era China and East Asia in general (2007). Ong suggests that the creation of special economic zones is what allows the state to open up a space of neo-liberal experimentation within its own borders, without otherwise questioning the state's authoritarianism. The idea of the special economic zone as an *experimental* site is a particularly apt description of the reform-era hospital.

[14] See Heping Jhia (2005).

shift, mobile clinic, travelling around the country-side in search of its contract workers (Anagnost 2006). In none of these models can the conditions of experiment be characterized as incarceral as such. Rather, the off-shored clinical trial takes place in the space of "free movement" opened up by market reform, where the clinic plays the role of traffic filtering gate, separating patient flows according to their health coverage and revenue-raising potential, and performing multiple functions for different classes of patient. Nevertheless, there is a clear expectation on the part of foreign investors that relocation to China will compensate for the excessive fluidity and "non-compliance" of the North American volunteer. In its report on pharma off-shoring, investment consultant firm Ernst & Young cites China's extensive health infrastructure as a key argument in its favour, clearly calculating that the remnants of its mass healthcare system will reintroduce an element of predictability, if not coercion, into the clinical trial business (Ernst and Young 2006).

Whether or not Chinese patients will be as compliant as expected is an open question--in their studies of the offshored high-tech work site, both Andrew Ross and Aihwa Ong point out that foreign companies are coming up against the problem of extreme labour mobility, as the floating class exercises one of its last remaining freedoms, that of fleeing from one work site to the next (Ross 2006; Ong 2007). Neo-liberalism here confronts one of its characteristic problems: How to incarcerate a form of labour that is constitutively in-movement? How to re-introduce an element of coercion into the flow of traffic? Given the growing importance of offshored biomedical and pharmaceutical experiment, it is highly likely that the same kind of problems will be encountered in the effort to valorize the bodily labour of the clinical trial participant.

Traffic and its Discontents

The constitution of this experimental, floating labouring class, and the challenge it poses to a Leninist eugenic public health, is reflected in the shifting politics of the PRC on such practices as commercial sex work, drug taking and HIV/AIDS.[15] The Communist Party first adopted measures against prostitution after conquering Shijiazhung in 1949, when it summarily shut down all local brothels and sent prostitutes to re-education camps. In other cities, prohibition was less spectacular but no less effective, with the introduction of various legal restrictions leading to a gradual phasing out (Henriot 1995). Although prostitutes were considered victims of labour exploitation rather than criminals, official prohibition meant that many of them were interned in re-education camps and forcibly returned to their families or farm collectives to engage in "productive" work. Interestingly, it seems that the effort to regulate prostitution was conceived of as part of a larger project of control over China's floating populations in general – vagrants, beggars, homeless

[15] I use the term "sex work" deliberately here, since long before the term came into use by Western prostitutes campaigning for worker's rights, the Chinese Communist Party had already categorized prostitution as a labour practice, a class phenomenon more than a question of cultural, moral or gender politics (Henriot 1995).

children, drug addicts and unattached women – who threatened to undermine state control over both productive and reproductive labour (Henriot, 1995: 473). Within the Maoist project of collective nationalism, the unregulated movement of people, their exodus from rural to urban centres and from family to street-life, could only be seen as a drain on the productive energies of the nation.

Herein lies a key difference with the politics of post-reform China--since in often unacknowledged ways, the latter's economic success is intimately dependent on the seasonal mobility of the floating poor. The Mao-era restrictions on migration were officially relaxed in the 1990s in implicit recognition of this fact, although rural migrants are in principle required to return to their villages when not employed. In this way, the post-reform era has established something like a controlled traffic flow between rural and urban regions. China can no longer afford to re-discipline its floating poor into the stable structures of agricultural collectives. And yet the social and cultural deterritorialization generated by market reform also presents enormous problems in terms of the destabilization of social relations. Market liberalization has not only transformed the relationship between rural and urban China; it is also generating extreme reconfigurations in the realm of ethnic, sexual and gender politics.[16]

Along with this upsurge in human traffic of all kinds, there is a common assumption that market reform has once again opened the gates to prostitution, bringing with it the old drug problems, venereal diseases and now HIV/AIDS.[17] In its response to this revival, the reform-era PRC has vacillated between the old punitive methods and a more accommodating, indeed enabling, approach. The Ministry of Public Security has launched periodic crackdowns since the late 90s, rounding up the poorer and most visible of sex workers – those working on the street – before making loud public announcements about progress made in the on-going task of eliminating prostitution. And in terms of public health responses, Maoist methods of quarantine, surveillance and re-education coexist in seeming contradiction with local campaigns for HIV prevention and condom distribution (Hyde 2007, 202; Beyrer, 1998: 115). But given the growing importance of prostitution for China's regional economies, it is arguable that the old punitive measures can only go so far. In 2000, the "new left" economist Yang Fen estimated that the Chinese sex industry contributes up to 12% of GDP. When the State Council issued its "Regulation on the Management of Places of Entertainment" in 1999, he

[16] For an excellent insight into some of these processes, see Sandra Theresa Hyde (2007).

[17] There is considerable overlap between HIV risk, rural-urban migration, seasonal work such as mining (for men) and sex work (for women), injection drug use and participation in high-risk forms of biomedical labour. The most publicised example of the latter in recent years has been the illegal trade in blood products. Many of the rural poor who donated blood for income were infected with HIV and other diseases due to unsafe blood transfusion procedures. On all these points, see Quian, Vermund, Wang (2005); and on the blood market and its political economy Anagnost (2006).

argues, the Chinese GDP dropped by one percent (Zhong Wei 2000). Sex work, along with drug trafficking, also forms a major impetus behind the economic success of such border-regions as the Mekong river. The plans to convert this area into a tourist-driven development zone, linked up with northern Thailand, Burma, western Laos and Yunnan by a series of cross-border trade routes, has received support from The Asian Development Bank and ASEAN states (Beyrer 1998, 108). Indeed, it appears that in some of the more impoverished areas of China we are seeing a return to the regional financing strategies of the Republican Era, where provinces such as Yunnan gained up to half of their revenues from taxes on prostitution (Remick 2004; Hyde 2007). As I suggested above, the introduction of clinical trials into China is parasitic on these developments, since the patients who are most likely to be recruited into clinical trials are also those that are over-represented amongst China's floating populations. As a form of transactional labour, clinical trial work should therefore be placed alongside prostitution, drug trafficking and consumption, blood sale and various forms of service labour (domestic or in the tourist industries) as absolutely pivotal to the success of China's special economic zones. These are all forms of labour that generate value from the transversal circulation of desires, affect, body fluids and pharmacological substances; and labouring bodies whose surplus exposure to biomedical risk (from unprotected sex, needle sharing, unsafe blood donation or simple lack of health care) is precisely what makes them valuable from a clinical point of view.[18]

The experimental transformation of post-reform China not only promises to have immense consequences in terms of cultural, sexual and gender relations but also places the politics of desire at the very centre of labour concerns. This raises the question of whether or not we are likely to see the rise of new kinds of political action at this level—in other words, a contestation of the very *experience* of neo-liberalism, which at this point in time is an experience of extreme risk exposure. It is in the destabilizing conjuncture, in other words, that reform-era China finds its most promising source of surplus value, the experimental something that needs to be valorized and contained. It is here too that it is likely to encounter the strongest resistance. China has already seen the rise of new kinds of sex and gender politics around HIV/AIDs, prostitution and sexual minorities. There has also been at least one instance of legal contestation of the clinical trial process (involving the HGV-1 trial) (Cyranowski, 2005). What is at stake in such embryonic forms of contestation, I would suggest, are the burdens of experimental risk and the politics of its distribution. The experience of self-transformation—biomedical or otherwise—is always a dangerous one. And yet neo-liberalism unfairly intensifies this danger for some (robbing them of all forms of social and medical protection) while using their experience of risk as the very source of capital accumulation. Rather than contest the social disruptions of neo-liberalism as if they were

[18] Not incidentally, many of the clinical trials currently being carried out in China are related to HIV. Insert reference.

problematic in themselves, I would suggest that a properly experimental politics of desire would be interested in establishing the conditions under which the experiment can become liveable.

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