Articulating New Accountability Systems: Preliminary Integrated Framework
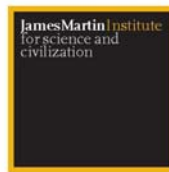
Daniel Neyland and Steve Woolgar, University of Oxford, UK

João Arriscado Nunes, Marisa Matias, Ana Raquel Matos and Daniel Neves, CES, University of Coimbra, Portugal

Rob Hagendijk, ISHSS, University of Amsterdam, Netherlands

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GENERAL INTRODUCTION

João Arriscado Nunes, Marisa Matias and Daniel Neyland

The ResIST project's objective is to understand processes that contribute to the increase in inequalities *through* the role of Science and Technology, but also to understand processes that contribute to mitigate inequalities *through* Science and Technology. The enhanced role of Science and Technology in the global knowledge economy gives such understanding urgency.

The role of Work Package 3 is to identify and analyse the emergence and workings of accountability systems that provide for the explicit stating and framing of distributional issues related to the design, development and social appropriation of scientific and technological resources. Systems of accountability are the means by which the potential distributional consequences of science and policy and practices can be recognised and assessed — and potentially incorporated — by formal elements of the political system. Accountability systems attuned to the needs of the disadvantaged are thus the prerequisite for reorienting scientific governance towards greater social inclusion in building S&T priorities and in distributing its products.

Accountability systems embody normative assumptions about the purposes and uses of S&T. The boundaries between alternative systems and conventional policy and practice are an important site of contestation in scientific governance and one where any reconfiguring of interests can take place. ResIST will look at the construction of alternative accountability systems in two contexts:

- Redistributional issues associated with the design, development, access to and use of mundane, everyday technologies;

- Experimental initiatives in capacity building and priority setting with the aim of remediating inequality.

This Work Package (WP) will pursue three tasks. Two of them will be followed in parallel and consist of two sets of case studies linked to the above mentioned different contexts of construction of alternative accountability systems. The additional task is to elaborate an integrated framework for analysing and evaluating experiences with innovative approaches to accountability, taking into account the twin issues of capacity building and redistribution. One of the aims of this preliminary version is to be used as a set of general guidelines for the work on the case studies. During the last six months of the workpackage, this framework will be revised taking into account the case studies and will be given final form.

This document is organized in two different sections.

The first section consists of a discussion of social science approaches to accountability. It was elaborated focusing on the notions of accountability in public, accountability of public and accountability for public, even considering that these three areas often overlap in instances of accountability. Accountability *in* public relates to the sense in which forms of interaction are occasions of accountability. Accountability *of* public focuses more narrowly on those occasions where groups of people are rendered available to be held to account through, for example, surveillance systems (airport security, CCTV cameras, speed cameras and so on) or some other notable mechanism for accounting. Accountability *for* public refers to those actions understood as carried out, usually by an organisation, on behalf of an often unspecified mass audience. The links between the discussion of the notions of accountability above mentioned and case studies to be developed on redistributional issues associated with the design, development, access to and use of mundane, everyday technologies are brought to the light.

The second section has the purpose of designing a framework for the study of initiatives aimed at addressing issues of inequality as they are related to the active engagement of concerned actors and public bodies and institutions. This task is pursued through the identification and characterization of the procedures which allow public policies to be made publicly accountable for their effects on inequalities. In that sense, the very basic concepts of the project — equality and inequalities; science, technology and knowledge(s) and accountability — are addressed, as well as the way these concepts are linked to current debates on democracy, citizen action, accountability and the co-production of knowledge and social order. The way these discussions are connected to the identification and development of case studies on experimental initiatives in capacity building and priority setting which aim at the remediation of inequality is considered in the final part of this section.

The conceptual issues addressed in the first section regarding accountability will be revised in the second section in relation with the study of selected experiences in innovative procedures of pubic accountability. The role of science and technology in these experiences will be explored as part of the broader process of generating new configurations of knowledge associated with situated responses to inequality.

SECTION 1

Articulating new accountability systems and redistributional issues associated with the design, development, access to and use of mundane, everyday technologies

Articulating new accountability systems and redistributional issues associated with the design, development, access to and use of mundane, everyday technologies

Daniel Neyland

Said Business School
University of Oxford, UK

Introduction

The main objective of this report will be to identify and analyse the emergence and workings of accountability systems that provide for the explicit stating and framing of distributional issues related to the design, development and social appropriation of scientific and technological resources. Systems of accountability are the means by which the potential distributional consequences of science and policy and practices can be recognised and assessed — and potentially incorporated — by formal elements of the political system. Accountability systems attuned to the needs of the disadvantaged are thus the prerequisite for reorienting scientific governance towards greater social inclusion in building science and technology priorities and in distributing its products. Because accountability systems embody a whole range of normative assumptions about the purposes and uses of science and technology, the boundary between such alternative systems and those of conventional policy and practice is an important site of contestation in scientific governance, and one in which any reconfiguring of interests will take place.

Examining the values and processes which inform accountability in specific contexts will help give them a common framing and provide a deeper understanding of their successes and failures in securing wider embedding in policy and practice.

Research Questions

This examination will be used to ask: How can we develop an understanding of the mundane and pervasive ways in which science and technology developments shape the organisation of life in a variety of locales? How can we develop an understanding of the interconnected and multiple locales through which technologies move? What methods do we have available for developing appropriate policy for such interconnected locales? What would constitute appropriate mechanisms for holding so many policy locales to account? How could accountability mechanisms be developed for the benefit of those in specific locales? What methods of assessment need to be developed for considering such benefits and beneficiaries?

Case Studies

1. *Textiles* Clothing forms a ubiquitous aspect of consumer lifestyles in the developed world. However, often t-shirts are produced in developing countries, where questions

are asked of labour conditions, safety and hours of work. Subsequent to use in the west, t-shirts are often donated to charities and shipped back to the developing world where they form the focus of emerging industries for accessing, distributing and owning such garments. How could these contexts of production, shipping, usage, shipping (again), re-distribution and usage (again) be connected through policy developments? Could a system of accountability be developed for encouraging the connectivity of these locales to be constituted in such a way as to be advantageous to the developing world?

2. *Vaccines* Vaccines can form a pervasive, mundane and routine expectation within societies of the developed world (aside from questions of the reliability of MMR and questions of the availability of flu vaccines). However, the absence of, and political controversies pertaining to, vaccines in the developing world require that many aspects of day to day routine are organised around attempts (and failures) to gain access to vaccines in appropriate settings, within appropriate time frames, for appropriate sections of a population. Much of this access and routine expectation derive from vaccine development and ownership by developed societies. How might these contexts of vaccination be drawn into a connected system of accountability? How might such a system be developed in order to enhance the health and well being of those in the developing world?

3. *E-waste* With the growing use and disposal of IT equipment, questions are being asked of where waste should go, how IT should be dismantled and what impacts such e-waste is having on particular locales. Currently it appears that the far-east provides the context for the development of IT, the western world provides the context for much IT use and the developing world (particularly India, China and Africa) provides the context for IT disposal. This case-study will ask: how can these contexts be drawn together through policy so that developers and users are also aware of, and perhaps more responsible for, disposal issues? What are the most appropriate ways for disposing of e-waste? Can we develop reliable mechanisms for holding to account developers, users and the contexts of disposal in order to enhance benefits of this connectivity of locales for those in the developing world?

How this report works

The remainder of this report will work as follows. First, the next section of this report will introduce three distinct areas of accountability literature drawn from academic research. Second, the subsequent section will then offer more detail on each of the case-studies and the current concerns indicated in these areas. Third, the case-study issues and areas of accountability will be drawn together into an initial and provocative assessment of the likely questions to be raised in doing accountability research into science, technology and inequality. Fourth and finally this report will set out the research design for this particular work package section.

ACCOUNTABILITY

Introduction

This section will introduce and interrogate social science approaches to accountability. The section will be organised into three parts focusing on what I have termed accountability in public, accountability of public and accountability for public. These three areas often overlap in instances of accountability, but I have separated them out here for ease of presentation.

Accountability *in* public relates to the sense in which forms of interaction are occasions of accountability. For example, conversations might involve one speaker providing an utterance to be held to account by a second speaker whose subsequent response is then available to be held to account by the first speaker. The notion of public tied into this approach is an idea of mutual availability for accountability assessments. This approach treats accountability as a pervasive phenomenon, constitutive of everyday forms of interaction (constitutive in that through holding each other to account, more or less mutual intelligibility is accomplished). However, the form of accountability outlined can be characteristic of professional as well as mundane settings. Accountability in public derives mostly from the work of ethnomethodologists.

Accountability *of* public focuses more narrowly on those occasions where groups of people are rendered available to be held to account through, for example, surveillance systems (airport security, CCTV cameras, speed cameras and so on) or some other notable mechanism for accounting. The form of public implicated in this sense of accountability refers most often to those groups of people who pass through a particular mechanism of accountability (such as airport security) without encountering problems. Those singled out for closer scrutiny and those who operate the system are not treated as members of public, but are understood according to a variety of further criteria (police officers, security staff, possible terrorists, etc). Accountability of public derives mostly from the work of neo-Foucauldian and surveillance theorists.

Accountability *for* public refers to those actions understood as carried out, usually by an organisation, on behalf of an often unspecified mass audience. This includes, for example, company accounts made available for the public good or in the public interest. In effect these 'publics' tend to be fairly narrow and specialised (those who are interested in and have the time and skill to read reports, accounts and other ephemera made available by organisations; that is they are not, in practice, often noted as members of the general public). This form of accountability includes: calls for organisations to be transparent; for particular (often controversial) areas of decision making to be democratic (predicated on a form of participation through information); and for (sometimes publicly funded) organisations to demonstrate their value for money, responsibility (social, corporate) and ethical standards. This is an under-developed area of enquiry, mostly derived from work by management researchers.

Each of these areas of accountability is complex and the precise version of public incorporated into each instantiation of accountability requires consideration. The following sub-sections will provide a more detailed analysis of this tripartite formulation.

Accountability *in* public

The first field of accountability research focuses in detail on the contingent accomplishment of accountability. This is found in the ethnomethodological tradition and equates to a form of accountability *in* public. The ethnomethodological tradition considers forms of mundane accountability (see Garfinkel, 1967; Luff and Heath, 1993). The claim here is that in making sense of the world each turn in a social interaction (for example a conversation) involves demonstrably holding to account the adequacy of the previous turn (by demonstrating in a conversation that the previous turn has been understood in a particular way, thus rendering that understanding available for scrutiny by other interactors). Accountability is a mundane, pervasive organising orientation for social action. In this sense interaction is constantly focused on making things accountably available in public. This does not rule out consideration of more formal mechanisms of accountability (for example in workplace studies of air traffic control centres, Suchman, 1993). Instead the claim is made that even formal mechanisms of accountability are dependent on routine, moment to moment interaction through which sense is made of the system and accountability accomplished. Of relevance for this report will be ethnomethodological approaches to evidence (for example, Lynch, 1998) through which courtrooms, for example, are considered as 'in public' mechanisms for assessments of accountability.

The ethnomethodological approach treats accountability as a pervasive and constitutive feature of everyday life. Ethnomethodology began with Garfinkel's (1967) work on courtroom activity. He drew on the work of Parsons on the reproduction of stable social orders and encounters (see Coulon, 1995, for a discussion) and the work of Alfred Schutz (see Sudnow, 1972, for a discussion). Ethnomethodology is focused on practical accomplishment and "permanent tinkering" in social life (Coulon, 1995:17). Concepts of reflexivity, accountability and indexicality are utilised in considering the ways in which members of a social group or exchange can be seen or heard to be producing representations of, and in, that event. As Strum and Latour suggest (1999), within Garfinkel's ethnomethodology there is no society or social relations until they are performed and recognised as such. Being a member of society is itself an on-going accomplishment with people managing their own "observability," (Rogers, 1983:81). Thus ethnonmethodology is concerned with the ways in which social interaction is made and maintained through on-going and everyday accountability relations made available in forms of interactivity. As Heritage suggests, Garfinkel's concern was "directed at examining how various types of social activity are brought to adequate description and thus rendered 'account-able,'" (Heritage 1984:136). However Garfinkel was clear that in producing an account of, for example, a conversation, "Many of its expressions are such that their sense cannot be decided by an auditor unless he knows or assumes something about the biography and the purposes of the speaker, the circumstances of the utterance, the previous course of conversation, or the particular relationship of actual or potential interaction that exists between user and auditor. The expressions do not have a sense that remains identical through the changing occasions of their use," (in Sudnow, 1972:5). Thus, for ethnomethodologists, accountable interaction is a contingent accomplishment.

It should not be assumed, however, that ethnomethodological approaches to accountability are exclusively preserved for mundane, ordinary interactions. Importantly, formal, professional mechanisms of accountability are given the same treatment as conversations. Heath and Luff (1999) produce an analysis of CCTV from an ethnomethodological remit. Their concern lies in how CCTV is used as a tool on the London Underground by station operatives to assess how platform conditions can be rendered controllable. Heath and Luff suggest that station supervisors on the Underground often have to deal with quick glances at scenes displayed on monitors and less than complete information. They subsequently need to make guesses about what might be happening just beyond a camera's viewpoint. Heath and Luff argue that "video technologies used in concert with other devices, like radio, form a critical resource for collaborating with colleagues and developing a coordinated response to an emerging incident," (1999: 3). Such social and technical coordination can help to produce a relatively coherent and seemingly complete response to an incident.

The station supervisors put together a range of claims in these responses. Claims are made about "unusual passenger behaviour," (1999:3) including passengers standing still or dawdling, carrying large packages, being over or under dressed for the time of year, wavering close to the platform edge and so on. "Control room staff practically discriminate apparently routine behaviour for organisational purposes," (1999: 3). This practical discrimination, drawing on the work of Sacks, emphasises moves made from uncertainty to certainty. "To make temporary, fragmentary and disjoint views of the world coherent and useful, relies on routine categorisations and discriminations made with respect to organisational purposes, of the human conduct they see before them," (1999: 3). Heath, Hindmarsh and Luff (1999) argue that tube drivers develop "occupationally relevant ways of perceiving the scene," (1999:561).

The interactions between tube drivers, platform conditions, specific stations and times of day, are often diffuse and disjointed. However the decisions made by the drivers form a kind of coherence from the disparate elements and form these elements into something which is "circumstantially sensitive," but which relies on "background expectancies," to make a judgement about the scene (1999:563). According to Heath, Hindmarsh and Luff (1999) the work of building accounts of activity "is not simply a matter of contrasting some event or appearance with what might ordinarily be expected to happen, but rather learning to see particular events, activities, people or objects in particular ways," (1999: 4).

Ethnomethodology, visibility and representation

This fits closely with a broader ethnomethodological concern for questions of accountability involving issues of visibility and representation (see for example, Goodwin and Goodwin, 1996; 1995; Jordan and Lynch, 1998; Jasanoff, 1998; Suchman, 1993). Goodwin and Goodwin (1996) suggest in their study of airport staff trying to pick out the correct aeroplane, that a quick glance at activity is "structured by larger organisational structures," (1996:62). Goodwin and Goodwin argue that aeroplanes are not just seen by airport staff, but are noted within a web of activity involving the positioning of people, runways, aeroplanes and various other elements. Goodwin and Goodwin suggest that seeing is a socially organised activity sustained by a community of practice. In this sense, airport staff when glancing at aeroplanes would do so within a structure of interactivity, demonstrating awareness of management prerogatives, the location of each plane, where other airport staff are,

what those other staff might want them to pick up on and so on. Furthermore, each interaction is part of an on-going series which over time build into a form of achieved coherence.

This approach signals a return to Garfinkel's (1967) work (particularly on coroners) and Sacks' (1972) work (particularly on police officers). Garfinkel's work suggested that coroners would actively constitute such totems of representation as cut marks on the wrists of dead bodies and make decisions as to whether they were marks of suicide or murder. That is, a suicide would not be straightforwardly noticed by coroners, but would be actively constituted by their processes of representation. Garfinkel suggests that when producing a representation; "whatever is there is good enough in the sense that whatever is there not only will do, but does," (1967:18). As Garfinkel is swift to point out, these representations as suicide are not based on any access to the original event, but what is particularly relevant for Garfinkel is that these decisions are made "for all practical purposes," (1967:vii). The coroners, as those bestowed with authority, would say that 'for all practical purposes' it appeared to be suicide, that is, they appeared to be able to get the body to re-perform the act. Thus the suicide representation became an account that then moved with the body through any subsequent accountability activity, be that to the family or friends of the deceased who now 'knew' the body as a suicide case, or through any subsequent legal process where the body was similarly noted as a 'suicidee.'

Although this accountability appears laden with uncertainty, Sacks (1972) suggests groups such as the police become expert in verbalising the observable. They orient toward a technique which elaborates on the observable with a form of discourse which situates and re-performs the observable as a verbalised reality. In this recognisably professionalized form of accountability, uncertainty is deferred through notable, visible, hear-able forms of organised accounting.

Although this sets out the basis for considering the ethnomethodological approach to the contingent accomplishment of professional accountability, it appears to underplay those occasions of accountability which are neither conversational nor particularly professional. Ethnomethodological work on the accountable accomplishment of everyday life can augment these ideas. A focus for ethnomethodological analyses of everyday accountability has been studies of walking. For ethnomethodologists, walking 'through' for example a town centre involves the on-going and active accomplishment of an accountable rendition of individuals, the activity of walking and the town centre space. This form of accomplishment is made clear by Ryave and Schenkein (1974): "We use the verb 'doing' to underscore a conception of walking as the concerted accomplishment of members of the community involved as a matter of course in its production and recognition," (1974: 265). Livingston's (1987) study of walking suggests that people crossing roads towards each other are tied into a constant mutual accomplishment. They are involved in accomplishing the possibility of crossing the road and crossing the road in an ordered way, allowing for the possibility of many people to cross the road toward each other without colliding. This mutual accomplishment outlines how busy public areas both constrain people to mutually achieve and are dependent on that mutual achievement for some form of sensible continued existence. As Crabtree suggests "space is not a worldly abstraction then, but embodied in, and integral to, the accomplishment of the activities that we do," (2000: 2).

These forms of everyday, mundane accountability (such as walking) and professional, ordered and organised versions of accountability (such as that noted through the activity of CCTV systems) do occasionally come together. For example, CCTV staff in Heath, Hindmarsch and Luff's (1999) work, professionally account for the mundane, accomplished accounting work done by those walking along London Underground station platforms. However, these forms of accountability appear quite distinct, with those walking sometimes unaware of the ways in which they are being accounted for and those doing professional accounting operating with a different set of expectations to those catching trains.

However, just as walking is a routine accomplishment for the people walking, producing an account of people walking along a platform is a routine accomplishment for London Underground staff. Accounts of routine walking can be accomplished without the need to provide any further account. The accounts of routine walking fit into what Hester and Francis term the "visually available mundane order," (2003: 36).[1] The important distinction for London Underground staff might be between those who can be adequately accounted for as walking in routine ways (and hence requiring no further attention) and those who can be accounted for as requiring closer attention (perhaps because they are too close to the platforms edge, perhaps because they appear drunk, have fallen asleep and so on). This distinction between mundane and non-mundane accounts shifts our attention towards the next section on accountability of public. While much ethnomethodological work mostly focuses on accountability in public (referring to those occasions of mutual sense-making accountability) other research focuses more specifically on mechanisms of accountability designed to hold particular groups of people to account.

Accountability *of* public

Foucauldian approaches

The second field of research considers accountability *of* the public, through Foucauldian inspired research which analyses social contingency in the production and use of, for example, accounting systems (Power, 1997; Baxter and Chua, 2002). A principle argument is that social control is achieved through forms of discourse (Foucault, 1977), calculation (Rose, 1996) and categorisation (Norris and Armstrong, 1999; Bowker and Star, 2000). When discussed in relation to systems of audit, Foucauldian inclined analyses suggest that social control occurs in virtue of a process of internalisation of categories and values (Miller, 1992; Miller and O'Leary, 1994; Rose, 1999; Ericson et al, 2003). A disadvantage of these Foucauldian approaches is that they tend not to provide detail about such questions as how internalisation works in practice (this will be taken up below).

Rose (1996) outlines a model of governmentality as "a kind of intellectual machinery or apparatus for rendering reality thinkable in such a way that it is amenable to political programming," (1996: 42). Such programming of the activities of the population does not involve a straightforward imposition of power by, for example, a technological system of accountability, but rather a "complex assemblage of diverse forces… techniques… devices that promise to regulate decisions and actions of

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[1] The mundane as a concept features in a variety of social science work. This includes Brekhus' (1998) work on the unmarked, Pollner's (1987) work on mundane reasoning and Shove's (2003, and with Southerton, 2000) work on mundane technology.

individuals, groups and organizations in relation to authoritative criteria" (1996: 42). Rose utilises Actor-Network Theory (ANT; particularly the work of Latour, 1987), to consider the ways in which activity by specific parts of the population is rendered accountable. Notably, Rose draws on Foucault (1977) and ANT to consider the ways in which routines for action are translated from centres of calculation into a diversity of locales. The internalisation of these proposals into everyday actions is "an outcome of the composition and assembling of actors, flows, buildings, relations of authority into relatively durable associations mobilized, to a greater or lesser extent, towards the achievement of particular objectives by common means," (Rose, 1996: 43). Through these processes individuals become "enwrapped in webs of knowledge and circuits of communication through which their actions can be shaped and by means of which they can steer themselves," (Rose, 1999: 147). Thus members of the population are made aware of their own subjectivity and reflect on their actions accordingly. This approach is used by Miller, amongst others, in looking at the ways in which individuals come to regard themselves as measurable units of performance and as "calculable," (Miller, 1992; Miller and O'Leary, 1994).

In this approach formal mechanisms of accountability operate to render populations aware of their own assessment, the terms on which they will be assessed and some sense of what would constitute success in terms of the assessment.[2] Similar ideas are drawn together in the work of Haggerty and Ericson (2000) when discussing what they term "the surveillant assemblage," (2000: 605). In constituting this assemblage they shift focus a little from the work of Foucault (1977) to the work of Deleuze and Guattari (1986), tying the practices of accountability into broad social developments regarding informational flows.

This approach to accountability appears to have the advantage over ethnomethodology of designating accountability as a (more or less) specific phenomenon involving particular forms of activity, technology and outcomes. Although ethnomethodologists also analyse professional forms of accountability, it is not always clear what would not count as an occasion of accountability for ethnomethodologists. However, neo-Foucauldian research on accountability is not without criticism.

Tinker (2005) offers a broad critique of Rose and Miller's (1992) work suggesting that they are unclear about their starting point (moving beyond the state) and lapse into a form of relativism which enables "highly conservative political agendas," (2005: 100).[3] Curtis (1995) is also critical of Rose and Miller's (1992) Foucauldian inspired argument for moving beyond the state or notions of government to ideas of governmentality which replace the state with multiple and fragmented discourses, disciplinary connections and webs of communication. Curtis argues that Rose and Miller's work does not allow us to "distinguish the finance ministry's attempts to have me pay my income tax, on pain of imprisonment, from my dentist's attempts to have me floss my teeth regularly, on pain of extraction… In effect, Rose and Miller fail to determine intelligibly the object which is to replace political sociology's preoccupation with the state," (1995: 580). Curtis goes on to ask: "Who are these 'authorities' and what is the basis of their 'authority'?" (1995: 582). Miller and Rose (1995) argue in response that: "Recent studies of governmentality have produced an

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[2] Similar Foucauldian ideas form the basis for Neu's (2006) work on accounting and public space and Jeacle and Walsh's (2002) work on accounting and the history of credit.
[3] Scapens (2005) offers a brief rebuttal of this critique.

array of rigorous and innovative studies of specific strategies, techniques and practices for the conduct of conduct, and elucidated the constitutive role of expertise in problematizing, inventing, and relating particular domains of individual and collective behaviour," (1995: 592). Although this addresses some of Curtis' critique, for our purposes in understanding accountability, we are still left with some questions. First, although this neo-Foucauldian approach presents ideas of centres of calculation, flows, assemblages and rationales, how do these operate in detail? Second, how might sections of the population pick up on rationales for action, or find themselves enwrapped in webs of knowledge and forms of communication? The next section will suggest an alternative approach which focuses more closely on treating accountability mechanisms as technologies worthy of study, the relationships established between people and these technologies.

An alternative: accountability as technology

An alternative approach to accountability of public is provided by focusing more explicitly on the technologies of accounting. By interrogating the technology in greater detail and precisely the relations between humans and non-humans in forms of accountability, we can move toward providing more detail on the notable absences of Foucauldian and neo-Foucauldian approaches. Much of the work which pays close attention to accountability as a form of technology also derives from Actor-Network Theory (ANT). However, unlike the work of Rose, ANT is used in these instances to understand processes of assemblage rather than communication.

ANT suggests treating human and non-human entities with a radical symmetry, allowing for no a priori distinctions of status to be carried into analysis. For Callon (1986) an actor-network is formed through the translation of entities via obligatory points of passage which go some way to stabilising entity identities. Via translation, "the actor-world accumulates materials that render it durable," (1986: 28). In terms of organisational accountability systems, an obligatory passage point might be an airport security check, for example, where passengers are scrutinised and various aggregate versions of passengers as secure and checked and smaller aggregates of passengers as insecure and requiring further checks, would be compiled. These compiled versions of passenger movements, with perhaps only tangential connection to the messiness of day to day organisational activity, would be actively translated into ANT entities by the actor-network of security staff, standards, reporting mechanisms, external assessors' (such as the Home Office) requirements and so on. Once translated into an ANT entity, the reports would then be available for mobilisation through the network to other entities (such as customer relations within the airport) and other areas of other networks (such as the organisation's website, perhaps translated into a very different form as publicity for an airport's good security record).

This notion of mobilisation is not straightforward however. Latour (1990) argues that a great deal of work goes into the construction of what he terms immutable mobiles. "…you have to invent objects which have the properties of being mobile but also immutable, presentable, readable and combinable with one another," (1990: 26). For example, scientists draw together a range of entities to act as faithful allies in the support of their account (say of a scientific discovery). These entities will be tied together in such a way that the account they form is understood in the same way in each location in which it is read, presented (etc). According to Latour, if there are competing accounts, the strongest will be "the one able to muster on the spot the

largest number of well aligned and faithful allies," (1990: 23). In this way airport managers, for example, would package information from a range of different sections of the organisation, in standard ways, into reports. They would then make claims about the reports and draw in corroboration of their reports from a variety of audiences (depending on the nature of the report, this could include Customs and Excise, retail groups, shareholders, etc). Airport managers could also tie into their organisational reports some suggestion of how the reports were collected, collated and filed, in order to produce an immutably mobile account that travelled from the managers' office to other organisational departments in a stable manner. However, Latour makes no guarantees of immutability. There is no secret recipe for ensuring that a collection of entities will stay together and will be understood in the same way in each location to which they move.

Mol and Law (1994) talk of the instability of such ANT mobiles as fluid features of networks. In Mol and Law's (1994) approach to fluidity, there is much less expectation of stability. In their study of anaemia diagnosis in Africa, Mol and Law highlight a range of fluidities in the way disease is talked of, accounted for and treated. Law and Mol (1998) ask "what can be held and what by contrast escapes the grasp. Our object is to distinguish between that which is (ac)countable and that which is fluid," (1998: 23). Fluidity might provide a more appropriate argumentative strategy than immutable mobility for organisational accounts. The various human and non-human entities involved in the organisation could form an enrolled set of actor-network entities bound together by a series of fluid accounts. The accounts would be fluid in the twin sense that they flow between various entities and are not entirely or necessarily stable. That is, they are not necessarily understood in the same way in each location into which they flow. Fluidity, however, and the treatment of accounts particularly, may require further specification.

It could be argued that despite fluidity, airport managers, for example, still attempt to construct immutable mobiles from compilations of airport activity. This could lead into the further argument that fluidity of the accounts, their mutability, is an unwelcome upshot of activity between actor-network entities that seek to challenge the account. For ANT approaches, however, such intentionality in constructing and challenging accounts is not greatly emphasised. Things either hold together or they do not. An organisational account turns out to be immutably mobile or fluid or something else; little analysis would be given to any entities' active attempts to strategically construct an immutable mobile. Immutability and fluidity are post-hoc descriptions of things which have happened (or not).

Instability of accounts, though, could still be accommodated via a range of ANT's theoretical devices. Firstly, there is the boundary object (Star and Griesemer, 1989). The boundary object is a locus for multiple representative practices that move through a more focussed passage point. Star and Griesemer (1989) argue that: "Scientific work is heterogeneous, requiring many different actors and viewpoints. It also requires co-operation. The two create tension between divergent viewpoints and the need for generalizable findings… Boundary objects are both adaptable to different viewpoints and robust enough to maintain identity across them," (1989:387). In this sense, organisational accounts could be seen as boundary objects, or organising focal points around which a range of entities are gathered, occasionally producing mutually incompatible renderings of the content of the account.[4]

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[4] Boundary objects and forms of accountability are developed further in the work of Briers

A second alternative for representing this notion of dispute or disagreement about the content of the account would be to consider non-connectedness or a non-represented blank figure (Lee and Hetherington, 2000). The blank figure is not centred on an idea of the unknown, but rather on something which has the ability to trouble or retain a questioning status. Lee and Hetherington (2000) link this closely into an analysis of ordering. "The blank figure… is the 'present absence'" that allows "for the possibility of …otherness," (2000: 173). Airport managers building uncertain accounts could be producing a disruptive flow for the airports' actor-network. The various entities could come together around a particular account or begin to dissipate through uncertainty over how the account should be read.

Thirdly it is possible to draw further on Law and Mol's work (1998) on accountability. In ANT, accountability is construed narrowly in comparison to ethnomethodology where it is considered as a pervasive feature of social life. Thus Law and Mol (1998) analyse mechanisms of accountability. They pursue a question of the work required to render fluid things available to accounting through "a labour of division," (1998:23). This labour of division, they suggest, is enabled through "technologies of calculation," (1998: 27). Law (1996) argues that this shift between the fluid and the (ac)countable requires "an active process of blocking, summarizing, simplifying and deleting…[which decides] what is to count and what, therefore, becomes counted," (1996:291). Within this view, organisational accounts could be the subject of summarising, simplifying and deleting in order to shift the focus from fluidity to stability. Here fluidity is not an inevitable feature of actor-networks but is rather a characteristic which can be worked on.

To summarise, neo-Foucauldian work on governmentality proposes various means for understanding the relationship between specific forms of accountability mechanism and public audiences (a form of accountability of public). However, the particularities of governmentality, namely how internalisation might operate and to what end, seem to disappear on close scrutiny. An alternative approach to accountability of public is to focus more specifically on the humans and non-humans of accountability mechanisms. Although the work of Rose (1996) draws on ANT, a more thorough-going analysis of ANT can provide a broader range of theoretical options for thinking through accountability. ANT can be used to look at ways in which a variety of entities are drawn together and, to some extent, hold together in a complex accountability network. This is not a network in the (relatively) straightforward sense of a sewage system connecting various pipes. Instead it is a diverse and sometimes unstable range of entities held together by various mobile entities and flows. The content which binds the entities is not always treated in an immutably mobile fashion however and a range of theoretical devices are made available for re-considering the instability of content (such as the boundary object and the bank figure).

Accountability *for* public

The third field of research focuses on forms of accountability *for* (and on behalf of) the public, looking at how, for example, organisations, scientific expertise and research should be governed and the adequacy of new methods of public consultation in the context of demands for greater accountability, democratic participation in

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and Chua (2001) who look at 'cosmopolitans' in accounting procedures which appear in multiple locations without being either native to that location or uncomfortably 'other.'

decision making, transparency and value for money (for an overview see Irwin, 1995; Kleinman, 2000; Kitcher, 2001). In academia this has led to concerns regarding notions of research quality, accountable performance and possible restrictions imposed by the arranged production of information designed to succeed on the terms of the transparency or accountability regime (Strathern, 1999; 2000; 2002). In line with these arguments, publicly funded organisations are coming under increasing scrutiny to demonstrate, through the provision of accountable returns, successful accomplishment of accountability demands and corporate organisations are increasingly involved in corporate social responsibility initiatives.

Transparency

The rubric of transparency is an increasingly pervasive feature of audit and accountability relations. Demands are made for organisations to demonstrate recognition of their responsibility for environmental impact, how money is spent, the returns received on money invested and so on. This section will argue, however, that transparency reviews do not straightforwardly open up opportunities for observing the internal dynamics of an organisation in order to render the organisation accountable and its members aware of their responsibilities. Instead, transparency reviews encourage the adoption of new or re-formatted informational production processes that produce information intended to fit the auspices of the review. In this way, internal aspects of organisations are not 'made available' but instead are re-oriented toward the production of specific forms of informational output that will externalise (or make available) a particular version of the internal dynamics of the organisation. By studying these production processes in detail we find a series of ad-hoc, uncertain and disconnected processes through which accountability criteria are met and transparency achieved (Neyland, forthcoming a).

Specifically, demands for transparency are deployed, amongst other things, in relation to the media (Media Transparency, 2003), global political campaigning (Transparency International, 2003) and corporate organisations (Shaw and Plapinger, 2001). These deployments call for greater accountability and greater recognition of organisational responsibility. Organisations are called upon to make internal aspects of organisational activity, externally available. Universities in the UK (and beyond) are not independent of this move to transparency. For example, there are government demands for greater transparency delivered through the government's Higher Education Funding Council for England (HEFCE). Also, Universities are required to make their activities compatible with the demands of the Freedom of Information Act.

Demands for transparency have raised a range of organisational concerns. For example, in Universities there are a growing number of concerns in research, in teaching and in University management as to the effects of transparency demands. Through these demands, academia is coming under increasing pressure to demonstrate financial responsibility. Internal auditors, external auditors, the Research Assessment Exercise, demands of Value for Money and Teaching Quality Assessments are just a few examples of the transparency exercises through which Universities are expected to demonstrate valued returns on public investment. These demonstrations take place in complex networks of accountability involving particular associations of people, technology and resources. Accounts that make specific claims to responsibility and value must be mobilised into these assessment and communication networks.

First, this raises questions regarding the specific modus operandi of this form of accountability: How do such networks assess value and responsibility? How are mobilised accounts reconstituted through communication networks? Do transparency reviews make available an accurate rendering of internal organisational practice or do they produce representations of activity fit for specific transparency criteria? Second, questions are raised regarding the form of 'public' implicated in accountability carried out on 'their' behalf. Public here often remains unspecified but usually involves claims that the ways in which public funding is spent should be made publicly available, that particular types of information are a public good or that some data is in the public interest. Transparency, although purportedly involving making things available to 'the public', often involves particular mechanisms which render things available to fairly narrow and specific specialist audiences.

How transparency operates with specific forms of public

Transparency has led a varied lifestyle of late. It has appeared in poetry (Gordon, 1969), post-modernism (Vattimo, 1992; Baudrillard, 1993), philosophy (Westphal, 1986), political analysis (Wall, 1996), psychology (Tagiuiri et al, 1955) and studies of accounting (Humphrey et al, 1992; Gray, 1992; Zadek and Raynard, 1995; Sikka, 2001; Canning and O'Dwyer, 2001; Drew, 2004). It has not travelled immutably, however, gaining many of its properties from the locations in which it has been deployed. Thus we have (amongst other things) transparency as a necessary pre-requisite for democracy, transparency as a right, the transparent as a linguistic proposition and the transparency of evil. This might suggest that we need to know what is meant by transparency on each occasion of its use. Or perhaps we need to pay attention to a more general flexibility of the concept of transparency. Or perhaps we should produce a concept of transparency for application in our analyses.

A dictionary definition suggests that transparent means "having the property of transmitting light so as to render bodies lying beyond it completely visible, so that it can be seen through," (OED, quoted in Westphal, 1986). Clearly such a definition cannot encompass all the varied uses of transparency outlined (for example, the transparency of evil suggests something more straightforward, that evil is obvious, while transparency as a pre-requisite for democracy suggests transparency, in the form of information availability, is important for voter decision making). However, the dictionary definition of transparency is not without utility for our purposes. Claims that organisations should be or must be transparent, appear to be arguments in favour of making organisational 'bodies' 'completely visible.' For example, Gray in his call for organisations to recognise their environmental responsibility suggests that "the development of accountability… increases the transparency of organisations. That is, it increases… the number of things which are made visible, increases the number of ways in which things are made visible and, in doing so encourages an increasing openness. The 'inside' of the organisation becomes more visible, that is, transparent," (1992: 415). This notion of making the internal aspects of organisations externally available with regard to environmental accountability is frequently grounded in attempts to specify what information should be made available and how that availability should be assessed. For example, Drew (2004) splits transparency into seven objectives and investigates whether or not public records match these criteria. The aim, Drew suggests, should be to allow "all those who are interested in a decision to understand what is being decided and why," (2004: 1).

A great deal of accountability research, however, focuses on problems associated with transparency. For example Canning and O'Dwyer argue "a commitment to public accountability and transparency… [is] frequently used as a convenient mechanism for avoiding criticism and maintaining the power and privilege of delegated self-regulation," (Canning and O'Dwyer, 2001: 725; although also see Sikka, 2001 for a critique of this view). Further problems with transparency are raised by Gray (1992) who presses for research on the forms of legislation necessary to enforce transparency, forms of information that should be available as a right and most suitable channels for communicating accountability. These are obstacles that Gray suggests could be overcome. However, in his footnotes lurk some significant challenges. Firstly, Gray acknowledges that: "provision of information to the demos will not ensure that the demos then behaves in a way I might approve. Subject to the constraints of power to act, it is fully accepted that the demos may continue along a path towards extinction… The point at issue is whether this was a democratically chosen path," (1992, footnote 21: 412). Secondly, Gray acknowledges that, "The making of things visible must, inevitably make some things invisible. The more things made visible, and the more ways in which they are made visible should decrease invisibility," (1992, footnote 28: 415).

A problem raised by the first acknowledgement is the assumption that making information available has a direct link to enhanced democracy. The acknowledgement suggests it is OK for people to choose destruction, as long as they have indeed chosen it. Wall's (1996) analysis of Rawle's (1993) conditions for democratic citizenship suggests that straightforwardly making information available is an insufficient form of transparency for democratic decision making. Making things available, what Wall terms public *accessibility*, is only one of three conditions to be met. Wall suggests that some things are publicly accessible without being publicly *understandable*. How information should be made accessible and understandable can be quite different according to Wall (this also raises a question about how to assess whether anyone has understood). Furthermore Wall suggests a third condition, public *acceptability*. This raises further questions of assessments such as: acceptable to whom, on whose terms, using what means of assessment. These conditions highlight the difficulty of justifying transparency on democratic grounds: that questions regarding access, understanding and acceptance can always be asked. The inconcludibility of such questions then lends uncertainty to notions of a move toward transparency equating to a move toward democracy.

A problem raised by the second acknowledgement from Gray (1992) is the assumption that the more things are made visible, the less remains invisible. To return to the dictionary definition, transparent means having properties that render bodies lying beyond the transparent entity completely visible, so that the transparent entity can be seen through. In this sense, rather than reducing invisibility, each occasion of transparency involves making some things clearly visible and some things see through (or invisible). Thus on occasions of transparency some things are seen and some things are not. According to Brown and Michael (2002), these questions of transparency relating to democratic adequacy and the division of the visible/invisible, can be approached through both realist and constructivist ontologies. Hence a realist treatment of information as existing and available might ask: how do we know when we have all the relevant information? A constructivist treatment of information as fluidly interpreted, gaining stability from occasions of use, might ask: how can the conditions for transparency be met when the conditions, information and concept of

transparency are all (potentially) in an on-going state of negotiation? Brown and Michael suggest such questions may lead to a crisis in transparency. They argue that one way out of such a crisis may be found in moves toward authenticity. However, in this section the argument will be taken in a different direction. Given on-going questions of informational adequacy and shifting divisions of visible/invisible, how do organisations still manage to achieve transparency?

There is a range of organisational mechanisms developed and utilised for this purpose. Strathern's (2002) analysis of British academic research suggests that such activities as summarizing, simplifying and deleting are a feature of attempts to achieve success in specific regimes of assessment such as the Research Assessment Exercise. According to Strathern (2002) quantification of research output into already-agreed-upon indicators, sets in motion the abstraction and decontextualization of research into assessable and accountable criteria. Indicators are a key mechanism, Strathern argues, for emphasising a focus on outcome "for it restricts the output (results) of observation to data suitable for constructing measures of it," and, "indicators come in turn to have a life or efficacy of their own," (2002:307). In this way, things are no longer measured by indicators, but rather indicators establish targets to aim toward. Utilising these ideas, transparency would not involve making organisational activity straightforwardly available. Instead, transparency would involve the establishment of technologies of calculation (such as performance indicators) that would abstract and decontextualise information designed to succeed on the terms of the transparency review.

In sum, Gray (1992) argues that making information available allows for greater transparency enhancing democracy and reducing invisibility. However, Wall (1996) suggests that making things available or accessible is only one of three conditions (also including 'understandable' and 'acceptable') to be addressed in considering democratic potential. Furthermore, Brown and Michael (2002) argue that we may be approaching a crisis of transparency. Yet the work of Strathern suggests that accountability involves the active rendering of things to be seen (visible) and things not to be seen (invisible). This latter work of accounting and discounting suggests that transparency would not involve straightforwardly opening a window on organisational activity. Making things visible would always also involve making things invisible. Thus if the aim of a transparency review is to make internal organisational activity available externally, this might involve the establishment of criteria (such as performance indicators) for measuring transparency and this would set in motion an active process of rendering things visible/invisible designed to succeed on the terms of the form of measurement/assessment.

This provokes several questions in regard to accountability for (and on behalf of) public. First, are transparency exercises straightforwardly centred on making information available? Second, do transparency exercises offer opportunities for enhancing democracy or organisational responsibility through information availability? Third, what (if anything) is rendered visible/invisible in transparency exercises and how does this question the notion that transparency makes the internal aspects of organisational activity, externally available? In my own research on University accountability activities (Neyland, forthcoming a), it was University auditors who put in a great deal of work to constitute and maintain organisational boundaries around what was to be made visible and what was to be held back within the organisation as invisible.

University auditors operated what they termed their 'audit universe'. Although it could be argued that there was a separate reality away from this organisational model (where heads of department scrabbled around looking for relevant information, the auditor pressed for returns that were late, some departments did not consider themselves to be very much part of a faculty, some faculty returns arrived on the auditor's desk incredibly messy and so on) these relations did not matter to the audit universe. They did not enter the audit universe. Drawing on the work of Douglas (1984), Hetherington (2002) and Strathern (1999, 2004) the audit universe can be approached as a network of boundaries through which information was mobilised in a relevant and compatible format to be eventually compressed and compiled in the annual audit return (or was not mobilised and remained on the peripheries of the Universe).

Once decisions on divisions had been taken and information compiled, University auditors presented an annual audit report to University audit committees. Once ratified, the audit report was then sent to HEFCE, maintaining and satisfying the HEFCE requirement for information to compile, compress and compare across Universities for further mobilisation to government and media audiences. Hence the ultimate 'public' in this accountability for (and on behalf of) public were HEFCE who are by no means members of the general public, but are instead the principle University funding body who are concerned about their own accountability to government. Operating on behalf of 'the public' in this case appears to involve taking responsibility to talk on behalf of or represent the public interest (or perhaps just involves grandiose claims to do so whilst engaged in more mundane accountability relations with other government auditors).

Achieving transparency via the audit universe required that specific organisational boundaries were in place to sift what was to be made visible and what was to be retained as invisible. As long as the boundaries produced standard returns (where the 'standard' equated to returns with all the boxes, deemed necessary by the internal auditor, ticked), transparency was achieved. The quality of the content of the returns and the extent to which returns matched internal organisational activity were not interrogated. Thus the audit universe formed a modest sense of accountable intentionality involving clearly circumscribed returns rather than pervasive re-orientations of organisational culture that those demanding transparency reviews suggest. What got to count were the 'visibles' included and mobilised through the audit universe. The work done to include and mobilise and not include and immobilise by University auditors turned out to be the work required to achieve transparency.

Summary

In this section of the report I have presented three different approaches to accountability, each predicated upon a distinct notion of public. In particular instances of accountability (as we shall see in the next section), these three areas can begin to overlap in challenging ways. Each of the areas of accountability presented also raises questions.

Accountability in public introduces a pervasive and constitutive form of accountability based on a form of 'public' which enables mutual, simultaneous access

to accountability assessments. This form of accountability is constitutive in that sense is made through successive forms of interactional accountability. However accountability in public also raises questions: given the pervasive aspects of this notion of accountability, what would not count as accountability? How could we be more specific about accountability relations? What might the differences between mundane and professional accountability relations mean for our understanding of accountability?

Accountability of public is focused more narrowly on the relations between specific mechanisms of accountability and particular groups of public. Often the form of public implicated in this area of accountability are those deemed to have unproblematically passed through the assessment of the accountability mechanism (with those who require closer scrutiny and those who operate the system, accounted for by various further non-public categorisations). The Foucauldian research on accountability of public suggests that individuals are enwrapped in webs of communication and centres of calculation through which rationales for action are communicated, internalised by individuals and the extent of internalisation is held to account. However, this raises questions regarding the precise nature of communication, of the means of governmentality and the workings of internalisation. The ANT approach to this area of accountability suggested instead focusing on the means of assembling. Yet this approach does not appear to cover all forms of accountability: it is not clear for example how ANT would relate to calls for greater transparency, organisational responsibility, value for money in public spending and so on.

Accountability for (and on behalf of) public takes these latter issues as a focal point. The form of pubic incorporated into this area of accountability often initially appears to be broad — with the public interest and the public good invoked as reasons for making information on research, organisational activity and corporate responsibility available. However, the public interest and the public good appear to narrow in terms of who has the skill, interest and time to hold to account information made available through these initiatives. It also seems to be the case that the relationship between organisational activity and attempts to make available versions of that activity for account, requires closer investigation. What would count as sufficient information on internal organisational activity and for whom? Do transparency reviews, for example, make available an accurate rendition of internal organisational activity or simply produce more and more information to fit the auspices of the review? Does the uncomfortable fit between accounts and activity matter given that transparency reviews tend to succeed on their own terms?

The questions posed by each of these three areas of accountability will be engaged through the next two sections of this report. First more detail on the three case-studies will be presented. Then each case-study study will be drawn together with these approaches to accountability to interrogate the problems posed by the case studies for accountability and the possibilities accountability mechanisms offer for change.

TEXTILES

Background

Concerns regarding the global trade of textiles have, in recent years, focused on the massive and rapid growth in the movement of textiles and related produce in ever greater quantities over ever greater distances at ever increasing speed. For example, it seems that cotton yarn now moves from say Texas as raw material in massive quantities to China or other parts of the developing world where it is processed into clothing garments, exported back and distributed through, for example, the US and EU, where in future years it is collected once again (this time through charitable donations) and shipped back to the developing world (see Rivoli, 2005). The rapid rise in such movements has led to claims that, for example, Chinese exports have risen by as much as 1000% to the US and 500% to the EU in some clothing goods (BBC, 2005a).

This massive and rapid growth in the movement of raw materials and production processes, connecting the developed and developing world, has raised three principle concerns: first, the extent of exploitation and poor labour conditions in the manufacturing of garments; second, whether or not (and how) existing textile manufacturers should be 'protected' from rapid increases in imports; and third, lesser concerns regarding the mass movement of textiles and questions regarding the usage and distribution of clothing on its return (via charitable donations) to the developing world. This report will briefly summarise the principle issues at the centre of these three concerns.

Exploitation?

Concerns regarding exploitation in the global manufacture of textiles are numerous and broadly dispersed geographically. Concerns have been raised regarding pay and conditions of textile workers in: Lesotho (Irin, 2006); Macedonia (Clean Clothes Campaign, 2006); Honduras, Brazil, Guatemala, Dominican Republic and Bali (all featured in Corpwatch, 1996); Australia (The Age, 2006); Morocco (UNRISD, 1996); Bangladesh (see WSWS, 2006); amongst many other places.

A variety of attempts have been made to draw attention to these exploitation issues, improve conditions and pay for workers and get retailers and consumers to make purchase decisions based on the ethical standards of goods' manufacture. Charities (such as Oxfam, 2004) have been at the forefront of attempts to draw attention to the conditions under which textiles are produced and the ways in which they claim the textile industry operates to the disadvantage of developing countries. Fair Trade advocates have been a focal-point for attempts to assess the ethics of clothing production and encourage retailers and consumers to think about their purchases (see for example, the Clean Clothes Campaign, 2006). One aspect of such campaigns is to get clear labelling on products giving consumers the opportunity to make choices, and to make ethical statements, about what they wear.

However, in order to understand Fair Trade labelling, we need to know more about what constitutes the Fair Trade movement. Nicholls and Opal (2005) argue that "Fair

Trade has emerged as the most important market-based mechanism to improve the lives of producers in developing countries," (2005: 5). They suggest Fair Trade should involve: moving people in the developing world out of poverty through market access; connecting producers and consumers; introducing beneficial not exploitative working conditions; a more equitable distribution of profits across the supply chain (this is sometimes known as a positive supply chain); and should address imbalances of information and power. Nicholls and Opal (2005) claim that these positive benefits of Fair Trade can be achieved through specific policies: setting an agreed minimum price for goods above the market minimum (these prices are set by FLO, see blow); development and technical assistance funded by this market premium for Fair Trade goods (the premium must be spent on agreed community developments); direct purchasing; transparent and long term contracts for goods; co-operative not competitive trade; the provision of credit in the form of advances of up to 60% on agreed purchases from traders to producers; providing market information to producers; organizing farm workers on plantations and aggregates of smaller family-run farms into democratic, participatory decision-making bodies; operating sustainable production (not using certain pesticides, not damaging local water supplies, etc); and removing labour abuses. Accomplishing these policies would enable Fair Trade to score well on its triple bottom line of economic, social and environmental accounting.

In order to achieve these Fair Trade aims, certification of Fair Trade products, processes and agreements are central. Initially assessments of Fair Trade goods and practices were carried out by organisations (charities and NGO's) in countries where the goods would be sold (in Europe and North America). These organisations established close relations with producers and assessed their 'fairness.' 17 of these organisations joined together to form the Fairtrade Labelling Organisations International (FLO) group in the 1990's. FLO has established certain certification standards (particularly in the area of agriculture, such as coffee, tea, cocoa and flowers). Certification involves sending FLO inspectors to spend a week or two with potential Fair Trade producers, checking their accounts and interviewing a random selection of workers. These inspectors assess the extent to which workers are organized into democratic, participatory groups engaged in decision making, that production is sustainable (including assessing local pollution) and an audit of trade standards is carried out (involving assessments of producers, exporters, importers, etc). This report is compiled by FLO-cert and goes to FLO's committee who decide whether or not a producer is entitled to be labelled and certified Fair Trade (and these inspections are repeated annually thereafter). This process also establishes a base price for the goods to be sold.

FLO helps connect Fair Trade certified traders with certified producers. Producers send to FLO six-monthly aggregate data on Fair Trade sales (including price, pre-finance if any, date, ship container and dock for each sale) and traders send aggregate quarterly data (including the same information, plus proof of price paid). The trader then sells the produce to a certified manufacturer who can then label the goods Fair Trade and sell the goods to retailers. The traders and manufacturers also inform FLO of these sales. FLO then forwards this information on quantities to recognised Fair Trade organisations in the country of the manufacturer who checks for any discrepancy in produce. Any mismatches require further assessment: should someone lose their certification? The amount of Fair Trade premium the producers should have received is then calculated and on the next FLO inspection the producers have to

demonstrate how this premium has been invested. Producers, traders and manufacturers must pay for FLO certifications and renewals (this is designed to put off less serious organisations from taking part and funds some of FLO's work, although much also depends on donations, loans and grants; for more information on certification, see Nicholls and Opal, 2005).[5]

Fair Trade labels do not just appear, they are the result of a complex, expensive and time-consuming process. However, do they work? Although certification and labelling is designed to offer consumers informed choice and to rectify "market imperfections," (Nicholls and Opal, 2005: 127), their success has been mixed. In agricultural goods, the FLO system operates in a number of areas, but has been questioned regarding its expense (should developing world producers have to pay?), the length of time it takes (organisations like Tesco want goods now) and problems with introducing new goods into FLO certification. It is still the case that FLO struggles with the labelling and certification of textiles (due to the number of different organisations and geographical distances involved). Fair Trade textiles and handicrafts have thus far been certified through the less rigorous FTO mark, based on self reporting.

Pertinent questions for this report are also raised by parallel research on forms of labelling process, particularly in the labelling and certification of supermarket goods as 'organic.' Klintman and Bostrom (2004) argue that standards for what counts as organic varies between products (between, for example, organic apples and organic margarine) and between nations (through food standards agencies establishing different criteria). For consumers, what might be an appropriate standard for Fair Trade? Would it matter if different types of certification (FLO or FTO), product or national Fair Trade system provided different types of certification for fair Trade products?

Further questions regarding Fair Trade's effectiveness have been raised by Berlan (2004) who suggests that the Fair Trade premium-funded community development projects do not always work out as expected. In her study of Ghanaian cocoa producers, the farmers became increasingly frustrated by what they perceived to be the poor standards of education their children were receiving through the schools their work was subsidizing (with an exam success rate of 0%). Berlan (2004) also suggests that cocoa farmers were by no means in direct trading relations with purchasers, as government organisations acted as representatives of farmers. This may result in farmers receiving less than the Fair Trade price for their goods. Nicholls and Opal (2005) also point out that more money would go to those in a developing country through £1 donated to charity than £1 spent on a Fair Trade good (however they suggest charity also only tends to deal with crises, whereas Fair Trade can deal with long-term community development). Further problems are raised by Manokha (2004) who argues that for all the focus on what should count as 'fair,' insufficient attention is paid to what should count as 'trade.' According to Manokha, encouraging farmers

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[5] There are alternatives to FLO which involve less stringent certification such as organisations which fund their own developing world projects, companies which provide consumers with information to carry out their own audit, a Fair Trade Organization (FTO) mark (run by the International Federation of Alternative Trade – IFAT) which relies more on self reporting and is designed to cover an organisation, not just a product. However, FLO continues to grow.

to carry on producing goods which they have always produced, in return for payment just slightly above the market rate, will only serve to continue existing global inequity. Developing world farmers will carry on being dependent upon purchasers from the developed world agreeing to purchase goods at certain prices which are deemed OK by purchasers from the developed world. Manokha suggests "in the existing structure of global trade each one of us, in his/her routine daily shopping may make a difference to the lives of some individual producers and small communities by simply choosing products with a Fair Trade label; however, the root causes of poverty and practices of forced labour, associated with it, lie deeper and Fair Trade is not a sufficient strategy to deal with them," (2004: 220). This view certainly appears supported by economic analyses which look at multiple interpretations of 'fairness' without offering multiple interpretations of 'trade' (see for example Stiglitz and Charlton, 2005; Bhagwati and Hudec, 1996, volumes 1 and 2).

Analysis of World Trade Organisation (WTO) discussions of moves to liberalize the movement of goods manufactured according to ethical standards, raise similar points. It is argued in this area that the imposition of 'ethical' trading standards are designed to ensure that developed and developing countries maintain their current (exploitative) relationship. For example, Sutherland, Jewell and Weiner (2001) suggest that "The majority of developing country governments question the sincerity of the labour rights concerns expressed by advocates of a formal trade-labour link in the WTO. These governments believe that a desire to protect high-wage manufacturing jobs from lower-wage competition is the primary motivation for industrial country pressure on this issue," (2001: 95). They go on to argue that "the WTO often has the appearance of a 'black box,' an institution from which decisions affecting their interests emerge in a mysterious and unaccountable fashion," (2001: 97). Sampson (2001) also points out that forms of standards — whether environmental or labour based — can be seen as a form of protectionism (that goods will only be allowed into developed country markets if they meet expensive criteria). Furthermore, Kofi Annan (2001) has suggested that what trade negotiations often involve is the lowering of barriers to moving raw materials from developing to developed countries with the maintenance of barriers to move finished goods in the same direction. Annan suggests that this effectively continues exploitative relations between developed and developing nations. However, each of these arguments buys into a more or less unified version of the 'developing world.' Who is talking on behalf of this constituency and what might differentiate the different member states and billions of people who make up this 'world'? Also, the implication of these arguments appears to be that industrialisation of developing countries is a necessary, inevitable step to 'development' and would be a positive step for developing nations.

Further problems with ethical goods and the certification of textile produce relate to the focus for labelling. Solely in the area of t-shirt production, labels exist which claim to certify: that the cotton involved in the t-shirt was grown organically (for example, by the UK's Soil Association, the EKO label by the Dutch group Skal, or a German certifier AGRECO which is a member of 'The International Federation of Organic Agricultural Movements' or IFOAM); that the textiles involved in the t-shirt have been recycled (signified by the Mobius triangular loop); that the goods have been locally produced cutting down on air-miles (using the label 'Locally Produced'); that the raw materials used have had a reduced environmental impact in terms of water consumption, transport, energy use, pollution and waste, particularly in weaving, spinning or dyeing (through the use of Oeko-Tex Standard 1000

environmental accreditation or ISO 14001 international standard on environmental management); that the manufacturer of the goods donates profits back to charitable organisations (through the 'Ethical Donation' label); and/or that the labour conditions under which the garments were produced were ethical (through SA8000 social accountability certification). These labels can each appear alongside Fair Trade labels. Thus what counts as ethical is by no means stable or straightforward. The UK clothing manufacturer Adili (see Adili, 2006) claims to use all of these labels on some or all of its goods.

For our purposes in understanding connections between the developing and developed world in textile trading we need to ask several questions. First, what are the prospects for a more rigorous form of Fair Trade certification for textile goods? Second, would Fair Trade textile certification prove reliable, and on whose terms? And what other labelling/certification processes would Fair Trade sit alongside? Third, could consumers be certain about the labelling and the extent to which the label acts as a guarantor of working conditions and would consumers be willing to pay a premium (and what should count as reasonable working conditions)? Fourth, given the extent and expense of certification, would Fair Trade prove scaleable for textiles? These questions involve several issues of accountability which will be taken up in the summary to this section.

Protection?

Since the 1960's the movement of textiles and clothing has been regulated through various instantiations of the Multi-Fibre Arrangement (MFA). This was designed as a temporary agreement which would give developed nations a chance to change national textile industries to compete more effectively with textiles from the developing world. The MFA kept textiles and clothing mostly outside the bounds of General Agreement on Tariffs and Trade (GATT) and subsequent World Trade Organisation (WTO) discussions. However, the temporary nature of the MFA appeared misleading as it went through five alternative forms across 40 years. During the Uruguay round of trade negotiations, it was decided that the MFA was to be replaced by the Agreement on Textiles and Clothing (ATC).

The ATC was designed as a further temporary measure to phase out limits on exports/imports after which there would be no quotas. The ATC plan was designed to operate from 1998 to 2005 involving three stages of gradually reduced impositions on textile trade. According to Friends of the Earth (2001) the ATC agreement involved several problematic areas. First, the percentages of allowed imports under the ATC related to all textile imports and so included restrictions on some things which had not previously been restricted under the MFA (the result was the ATC was more restrictive than the MFA for some developing countries who specialised in areas previously not regulated). Second, developed countries could count some goods as in need of further restrictive quotas, allowing other goods to move with fewer impositions (so yarns moved more easily than underwear). Third, 'safeguard' measures were allowed, through which some developed countries could identity specific goods as a threat to domestic products and establish strict quotas (the US developed 24 'safeguards' under the ATC). The ATC was designed to end in 2005.

The EU and US continue to control the amount of textiles allowed to enter from external markets. The ATC has not led to a complete end to the MFA and subsequent

restrictions on movement of textiles. Some NGOs (see Oxfam, 2004) have declared disappointment in this situation as have retailers seeking cheaper goods. France, Spain and Italy have supported EU producers' arguments in favour of quotas, while Germany and the Netherlands have supported retailers' arguments for removing quotas. The EU has introduced a system through which various textile products can be imported according to strict regulations. Thus the import quota of some textile goods can increase by 8% in the year following the end of the previous trade agreement (the ATC), while others can increase by as much as 12.5% (the goods covered range from men's trousers to bed linen). However, the EU has introduced an early warning system which will be triggered if imports rise above or get close to this level (BBC, 2005b). In September 2005 this happened with tonnes of Chinese textiles impounded at EU ports. Eventually these were released onto the market but had to count against 2006 quotas. This EU system angered both the Chinese (citing restraint on trade) and EU textile manufacturers (citing not enough restraint on trade). Under a WTO agreement countries can limit textile import growth from China to 7.5% per year until 2008 (BBC, 2005a). India has sought to take advantage of these limitations in developing more of its own textile exports (Business Line, 2005). China has strongly opposed these measures, arguing that if US computer giants want to expand into selling electronic goods in China, why shouldn't China be allowed to expand its textile sales into the US? (Washington Post, 2005). However, the US has relaxed quotas on Cambodian textile imports in return for guarantees that goods will not be produced under sweatshop conditions suggesting textile quotas are not entirely rigid (although as suggested in the previous section, the imposition of ethical labour standards has not always met with developing country support).

Ethical Cambodian pants are the tip of the iceberg in quota complexities. Imports to the US may appear rigid with certain amounts of certain types of goods allowed in from particular countries up to fixed limits. Yet importers can also make use of quota swings (sometimes shifting clothes from one category to another, from say ties to bras), special shifts (borrowing from one quota for another specific and approved good), quota carry over (using space left from last year's quota) and quota carry forward (borrowing from next year's quota). Import checkers in US ports have to attempt to keep track of these quotas, goods and caveats. However, quotas are more complex than this picture may suggest; the focus of quotas is on the origin of goods, but where do clothes originate from? If cotton is from Texas but a t-shirt was cut in China, or stitched in Bangladesh, or dyed or printed in Cambodia, whose t-shirt is it? At the moment the quota focus is on stitching, although previously it was on cutting. Further complexity is introduced by quota chasing. This involves firms seeking countries which have spare capacity in their quotas and quickly shifting production to that country in order to meet, for example, an urgent order from Gap. Uzbekistan now has a flourishing textile trade. Less scrupulous firms simply keep a constant supply of 'made in x, y, z' country labels to be stitched into clothing in line with available quotas and shipped to developed nations via countries with quota capacity. There has also in recent years been a trade in buying and selling quotas as commodities. If a trader believes, say Nike, are going to place a huge order for trainers next year, the trader will buy up quotas in advance and then sell space to manufacturers at a profit when Nike place their order. Once a nation reaches its quota in a particular area, subsequent items are treated as illegal immigrants. However, all of this protection has failed to protect jobs in the EU and US textile industry with jobs continuing to

decline.[6] What the textile quotas have managed to introduce, particularly in the US, is thousands of jobs for pro and anti textile quota lobbyists and textile quota checkers in ports.

Texas cotton has bought its way out of the yarn market (for a summary see Rivoli, 2005). A combination of advanced machinery, few employees, consistent weather (cotton crops can be killed by cold, heat, hail, damp or dry weather), access to fertilizers (and knowledge of how to use them) and University researchers focused on cotton, subsidies from the US government, constant shifts in working arrangements and crop insurance mean Texas cotton growers have remained consistently at the forefront of cotton production. For every dollar of cotton sold, US farmers get $1.20 and African farmers receive 50c. The US farmers get subsidies and take their goods (more or less) straight to market. African farmers often have to sell to (partially) state owned organisations such as COPACO first which then sell the material on to market. Although there is little agreement amongst researchers on the textile industry, it seems that the removal of US subsidies alone would not introduce a level playing field in cotton. Various claims are made that farmers in the developing world need more direct access to markets, or a better deal in getting their produce to markets, a better infrastructure of support for farming, better knowledge of fertilizers, more mechanised production and so on. It seems there is little likelihood of change in Texan cotton production.

Recent (and partial) textile trade liberalisation provided mixed fortunes for developed and developing countries. Textiles account for 30% of Portugal's export income and 30% of the labour force. Fewer restrictions on imports has led to calls for a mass retraining of the workforce (see Microsoft, 2006). Turkey has had to incorporate a view on textiles into its reforms required for accession to the EU. Some countries such as Bangladesh did not have strict quotas placed on them under the MFA and became attractive to textile producers. Since the demise of the MFA and introduction of across the board quotas, Bangladesh has become less attractive for manufacturers. For Pakistan 70% of their export income comes from textiles and the rapid growth and low prices of China has threatened a significant area of income. For China, although there has been a rapid rise in exports, this has led to strained relations with the EU, a continuation of quotas and questions regarding labour conditions. Discussions of EU trade liberalisation continue, although without much apparent hope of an easy or swift resolution (Guardian, 2006).

Movement?

In the global movement of textiles, less attention has been paid to the collection, shipping and distribution of clothing from developed countries back to developing countries in the form of charitable donations. However, questions have still been raised in this area. First, concerns have been expressed regarding the reliability of some organisations purporting to be charitable foundations set up to distribute clothes from developed to developing countries. This has led to several local authorities in the UK setting up their own scheme which attempts to guarantee that clothes will be sent to where organisations say they will be sent (see for example, Wirral council, 2003;

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[6] It is claimed that each US textile industry job saved cost $174,825 (Rivoli, 2005). This is part of the high cost –low cost t-shirt (other costs include labour exploitation and pollution from global movement of textiles – which could be termed cotton miles).

Poole Borough Council, 2006). Second, concerns have been raised regarding the distribution of clothing in developing countries. These concerns focus on power struggles over the local control of distribution and the selling of 'charitable' donations for profit. Reports of this activity are scarce, but PBS (2001) made a film regarding the second-hand 'charity' clothing industry in Zambia through which Salvation Army 'donations' undersold local produce and wiped out domestic clothing manufacture (Hansen and Transberg (2000) offer more detail on these issues). What appears to be 'charity' in one part of the world operates as a ruthless business in the developing world.

However, Rivoli (2005) suggests that the issue of 'donation' is far from straightforward. Firstly, domestic textile production in many developing countries was collapsing due to lack of equipment, low demand and the poor quality of goods produced. Secondly, the Salvation Army, for example, receives masses of donations from US households and takes out clothing it can sell in its shops. The rest is sold on to raise more money for the Salvation Army. It is the latter category of clothing which is then sorted by armies of labourers who sift clothing into something like 400 categories (40 for t-shirts alone). These categories of clothing go off to different markets to be sold on at a profit to the company who bought the goods from the Salvation Army. High value items are currently vintage rock band t-shirts which are sent to Japan for re-sale. What counts as valuable vintage does shift, so currently old sports shirts are low value, but this could change. Lowest value items are dirty or damaged clothing items which are sent to be recycled as car seats or used as rags in industry. Clothes sent to Africa are selected carefully; they should be clean, made from light cotton, darkly coloured, without excessive slogans and not too revealing. Slightly used Gap t-shirts are highly valued in Africa but not in the US. It is these t-shirts which form a competitive trade in Africa (particularly Benin, Togo, Congo and Tanzania). Men's clothing is more expensive than women's clothing as seven times as many US women donate clothing as men. This trade is mostly in cents not dollars.

Summary

The making and movement of textiles involves issues of exploitation, protection and donation. Each of these areas invokes a variety of questions of accountability. Fair Trade initiatives designed to cut down on exploitation involve questions of what would count as an adequate form of certification for Fair Trade textiles, how reliable would these forms of certification prove across complex production and supply chains, and what kinds of certification count for consumers? In the area of textile protection, across 40 years developed countries have made and maintained a complex quota-based accountability system involving attempts to control the entry of textiles into particular trading areas. This system involves a variety of sometimes negotiable boundaries. What are the prospects for change in this system? What changes might benefit the developing world? To what extent will the developing world have a voice in these decisions? The third area of this analysis focused on donation. Once again this introduced questions of accountability. To what extent does donated charity clothing reach the developing world as donations? How does the textile donation industry operate and who holds it to account? Are there ways in which this industry could operate and be assessed which might provide benefits for the developing world? Each of these questions will be addressed in the next section on 'Case Studies and Accountability.'

VACCINES

Background

Recent years have seen a resurgence in the vaccine industry (The Standard, 2006). Concerns regarding foot and mouth, potential flu epidemics and possible threats posed by forms of weaponry have seen vast increases in government funding in vaccines in developed countries. This has involved funding for research into new vaccines, new ways of developing or delivering existing vaccines and attempts made to stockpile vaccines. At the same time the vaccine industry has grown with companies investing heavily in vaccines, companies buying out other vaccine companies to expand their vaccine portfolio and companies looking into ways of expanding their current vaccine production rates. After several years of stagnation in vaccines, new targets for vaccines have been developed (such as cervical cancer), new types of vaccines have been developed (such as next generation flu vaccines) and new markets have been investigated (such as adolescents and adults, for example through the development of shingles vaccines for the over 60's). Currently the vaccine industry is worth $5.6 billion a year and this is expected to grow by 20% per year for the next five years. However what do these developments mean for those in the developing world? Do these developments simply mean more medical care, more freely available, leading to greater health in the developed world?

Developing World

The disease burden in the developing world is primarily based on forms of communicable disease according to the World Health Organisation (WHO). Respiratory infections, HIV/AIDS, infections at birth, diarrhoeal disease and tropical diseases (for example Malaria) account for most deaths in developing countries (WHO, 2004). This is in contrast to developed countries where cancer and heart disease have greater prevalence. It is claimed that in the developing world existing treatments are not always used effectively, interventions are ineffective or non-existent, and there is insufficiently widespread knowledge of diseases (POST, 2005). It is said that engaging with this disease burden requires medicine, education, infrastructure and health systems. So what kinds of interventions have been attempted?

Intervention in the disease burden?

It is argued that 10% of global medical research is devoted to conditions which account for 90% of the world's disease burden (POST, 2005). These are known as neglected diseases (see DNDi, 2006). A broad variety of organizations have been engaged in attempts to alleviate the disease burden of developing countries through vaccination. The World Health Organization, World Bank, European Union, Oxfam, vaccine organisations, UNICEF, amongst many others have attempted to provide impetus into the development of programmes of action to alleviate the disease burden of the developing world. This has led to the development of various initiatives, for example:

- South African Aids Vaccine Initiative (SAAVI, 2006)

- International Aids Vaccine Initiative (IAVI, 2001)

- Global Alliance for Vaccine and Immunization (GAVI, 2006)

- European Malaria Vaccine Initiative (EMVI, 2005)

- Medicines for Malaria Venture (MMV, 2006)

- European Public Health Alliance (EPHA, 2006)

- European and Developing countries Clinical Trials Programme (EDCTP, 2003)

- TB Alliance (2006)

- Drugs for Neglected Diseases initiative (DNDi, 2006)

- Initiative on Public Private Partnerships for Health (IPPPH, 2006)

Each of these initiatives involves multiple stakeholders, sources of funding and particular goals. For the European Union these initiatives tie into one aspect of the UN's Millennium Development Goals to combat HIV/Aids, Malaria and other diseases.

However, vaccination is not straightforward. Just as the vaccine industry is resurgent, organisations within that industry are uncertain as to the risks posed by movements into the developing world and benefits likely to accrue (e.g. organisations face financial risk in developing vaccines which may never come to market, may work but have few markets which can afford to cover the development costs, patents are relatively short, organisations are unsure that they can deliver the right vaccine, to the right people, with guarantees that the vaccine delivered is the one required, will be used in the right way and will alleviate the problem targeted). Also, the initiatives listed above involve many stakeholders, so co-ordination and funding are complex issues. Various governments (including the UK) have attempted to stimulate research by introducing means which should aid organisations in more effectively engaging in reducing the disease burden of the developing world. The UK government has proposed a combination of public private partnerships, a proposed international finance facility, advance purchase commitments (ensuring developers know that a certain amount of a vaccine will be purchased, prior to production), extensions of patents (meaning a company could make cheaper drugs by gaining income over a longer period, making drug research and development more attractive) and research and development tax credits to stimulate industry interest (POST, 2005).

Effective intervention?

It is claimed by a variety of organisations involved in vaccination that the problems faced in the developing world are incredibly complex (see for example, Oxfam, 2003). For example, ensuring that medicines are affordable involves negotiation between government and vaccine companies, the development of, for example, tax breaks to encourage development in this area, the regulation of the production of the medicine (to ensure its quality) and regulation to ensure that the promised prices are met. However, affordability, although complex in itself, does not guarantee a reduction in the disease burden of developing countries. Affordability needs to

operate in tandem with further complex processes to ensure that medicine is available. Availability involves transport issues (can the medicine get to the right place), infrastructure issues (is there a location for the delivery of treatment), education (is there a large enough body of people able to deliver the treatment) and a willingness and knowledge on the part of the local population to receive treatment.

In order to address these issues, a variety of apparently effective interventions have been proposed.

Tax breaks

A principal problem invoked regularly across debates regarding vaccine development for the developing world is the lack of financial incentives for big pharmaceutical firms and biotechs to bring to market vaccines for diseases 'of the poor.' The claim is made that although millions of people suffer with TB or malaria, for example, these people are too poor to be considered a sufficiently viable market for a vaccine that the corporation's costs will be recouped. The UK government (amongst many other public institutions) has looked into providing tax breaks for corporations doing research into 'poor' diseases. However, the UK government is clear that tax breaks alone are insufficient to provide remedies to all the problems of vaccination (drug development, drug delivery, health infrastructure, health education, etc).

Discount Treatments

Several initiatives have attempted to intervene in the disease burden faced by developing world countries. For example, in 2000 several US pharmaceutical firms offered to reduce the cost of its AIDS retroviral treatments from $10,000 per person per year to $2,000. This was combined with an offer from the US government that developing country states could take out a loan to purchase these treatments with a repayment interest rate of 7%. Orbinski (2001) suggested that "What is needed is not apparent solutions that consolidate and protect existing monopoly commercial interests," (2001: 226). Orbinski (2001) argues that such treatments could be made available profitably for as little as $250. Instead Orbinski looks to developments in intellectual property rights, public-private partnerships and further exploration of 'forgotten' illnesses for which treatments are available (such as African sleeping sickness) as the way forward.

Patents

Krattiger, Kowalski, Eiss and Taubman (2006) suggest that "Throughout the developing world, intellectual property (IP) constraints complicate access to critically essential medical technologies and products," (2006: 67). To address these issues, the UK government has also talked of extending the life of patents into drugs for the developing world. Given the apparent absence of a ready (i.e. profitable) market for 'poor' disease vaccines, extended patents might mean a pharmaceutical corporation can make a viable, but smaller income per dosage over a longer period. However, Lanjouw (2006) argues, it is not clear that this is definitively the case. Lanjouw (2006) points out arguments can be made equally vociferously for stronger or weaker

patenting. Lanjouw suggests that less patenting could mean wider access to the intellectual property behind vaccination developments, leading to a broader range of further scientific developments, a broader number of competing corporations in the market place and a lower price for drugs. Alternatively, longer patents could seduce big corporations into investing in vaccines which they could control for longer. The problem in this latter scenario, in line with the work of Blume (2005), is that vaccine programs can get locked in around a single drug. In Blume's (2005) analysis of polio vaccination it was not necessarily the most medically effective drug which was taken up, but one around which routines, publicity, various political assumptions, funding and so on were focused. The relationship, Blume argues, between evidence-based argument and socio-economic processes changes over time (for more on this, see Stanton, 1999; Lehoux and Blume, 2000; Blume, 2006; Blume and Geesink, 2000).

Lanjouw (2006) suggests a way out of this patenting mire would be to look at tailored patenting. "Those paintees would effectively be required to choose to make use of their patent protection either in rich countries or in poor countries, but not both. Because the profit potential in rich countries is much greater, owners of patents related to global diseases will naturally choose to relinquish protection in poor countries. Thus, the policy would lower prices in poor countries where greater incentives are not needed… At the same time it would keep intact patent-based incentives for diseases such as malaria that are specific to poor countries, where there is a clear argument to be made that new incentives are warranted," (2006: 110). Although an interesting proposal, there would be little way of policing health tourism (where patients would move to get cheap drugs) or drug tourism (where drugs would move to more profitable markets), there would be few guarantees that the most optimal drugs would be developed and this proposal would require a basic change in patenting legislation. Patents are effectively focused on stabilising the future around a particular artefact and have been imposed on developing countries seeking engagement with the World Trade Organisation. There appears to be little likelihood of change in patenting.

Pharma's markets

Glennerster, Kremer and Williams (2006) suggest that one way forward for the development of vaccines would be to construct markets for 'poor' disease vaccines. Their proposal advocates Advanced Purchase Commitments (APCs) which would act as pull factors to entice pharmaceutical firms into developing vaccines for otherwise less attractive (i.e. less lucrative) diseases. They suggest: "One proposal to incentivize private sector R&D investments in products for diseases concentrated in poor countries is for sponsors (rich-country governments, private foundations, or international organizations such as the World Bank) to undertake 'advance purchase commitments' for desired products, such as HIV vaccine… If no vaccine is developed, no donor funds would be spent" (2006: 67). They argue that this approach is cost effective, involving an outlay of $15 per life year saved.[7] They also argue that APCs are particularly useful for product development Public-Private Partnerships (such as IAVI and MVI, see next section). The cost-effectiveness of this approach is tied into broader arguments that vaccines are effective as they require less

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[7] Poor people are usually considered good value anything up to $100 per life year. Glennerster, Kremer and Williams (2006) argue that: "the US cost-effectiveness threshold is estimated to be as high as $50,000 to $100,000 per life-year saved," (2006: 74).

infrastructural needs than on-going medical treatments. Glennerster, Kremer and Williams (2006) argue that there are precedents for these pull factors such as the US Orphan Drug Act which encourages the development of drugs for rare diseases by offering longer than standard market exclusivity. They claim that since the Act in 1983, 200 orphan drugs have been developed. Before the Act, only 10 were developed.

The details of the APC proposal are as follows: a group of credible sponsors provide a legal contract, which sets out the total potential market for a drug (around $3b). The sponsors then underwrite a price (say $15 per treatment). This price is guaranteed for a certain number of treatments (up to $3b). Countries which will be eligible are also established at this stage. After this fixed price, the drug developer (who will have covered their costs by this point) must guarantee to sell drugs at cheaper price (say $1 per treatment). Sponsors would pay more than recipient countries of the initial $15 treatment (say $14 and $1 respectively). Subsequent products are also eligible for guaranteed price; if a better product comes to market, recipients can switch to another drug. The proposal suggests an independent adjudication committee oversees the agreement.

APCs are not without criticism. The work of Farlow (2004; 2005; 2006; and with Light, Mahoney and Widdus, 2005) suggests that the APC "model for these vaccines [HIV, malaria, and TB] is unworkable, inefficient, and inequitable towards the wide range of potential developers and suppliers of such vaccines." (Farlow, Light, Mahoney and Widdus, 2005: 2). Farlow (2005) argues that there seems to be a "set of literature that severely downplays the problematic side of APCs for early-stage vaccines, and that instead paints a picture of a 'simple,' 'straightforward,' and 'powerful' new tool, even though APCs have never been used for anything before," (2005: 2). According to Farlow (2005) these tools will struggle to replicate market conditions. Furthermore: "The case for APCs for early-stage vaccines was not helped by the early decision to trivialize the science of HIV and malaria vaccine development to one that is 'linear,' fixed, simple and static, when for early stage vaccines it is instead highly complex, and dependent on feedback loops, collaboration, and comparison of results and sharing of information," (Farlow, 2005: 4).[8] For Farlow, further problems with APCs involve questions of the size of the market (why would $3b be correct?), how to encourage further innovation instead of further sales of the same thing, how to figure out minimum standards of quality or effectiveness for these vaccines, whether or not APCs would damage PPPs (see next section), how non-eligible countries would react to these APCs, what the cost of running the systems would be, how firms will lobby to influence APC committees and how IP issues would be resolved. Farlow remains unconvinced that APCs would do much to resolve other areas of vaccine problems (such as infrastructure and education) and raises concern that authors advocating APCs have not consulted people from or working in the developing world. Orbinski (2001) is more damning, suggesting that discussions of whether or not there is a market for TB drugs are "little short of obscene," (2001: 231). Farlow, Light, Mahoney and Widdus (2005) suggest that more investment in

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[8] Farlow (2005) argues that later stage vaccines require different considerations: "For currently existing and near-market vaccines, purchase commitments are all about creating stability of demand, incentives to invest in production capacity, the tailoring of an already existing product to new users, the creation of low product prices, and access to vaccines," (2005: 3).

PPPs "would be better at unlocking the constraints of developing and emerging economy biotech firms, releasing their innovation potential," (2005: 22).

Public-Private Partnerships

Vaccine-related Public-Private Partnerships (PPPs) have been under development over the last ten years in a variety of guises. Broadly speaking, PPPs draw together private pharmaceutical firms, bio-techs and other private interests with public bodies such as UN agencies and state governments. According to Buse and Waxman (2001) PPPs can involve solving previous, seemingly intractable problems engaging multiple countries and conditions. PPPs can be distinguished through partnerships managed by intergovernmental agencies (e.g. GAVI) and those managed by a separate legal entity (e.g. IAVI). Sundaran and Holm (2006) suggest PPPs should aim to reduce global disparities through new drugs, better access to drugs, enhancing the quality and viability of vaccine markets and by putting health at the centre of developments. They suggest PPPs usually involve: shared objectives, governance or advisory bodies of public and private members, new combinations of skills, expertise and resources and the use of cross-sector techniques to achieve goals. Although most PPPs focus on drug development and distribution, some focus on health education. Several PPPs have an independent legal status, while others operate more like an informal collaboration. Walt (2001) outlines three main types of partnership: product development partnerships (e.g. new vaccines), systems/issues partnerships (e.g. Roll Back Malaria) and product based partnerships (e.g. donation programmes). Nishta (2004) further suggests that PPPs can be owned by the public sector but with private partners or hosted by an agency/NGO or orchestrated by a company (i.e. Action TB), or be legally independent. Nishta (2004) suggests partnerships can be focused on: product development (IAVI), improved access to healthcare products (Accelerated Access Initiative), global co-ordination mechanisms (GAVI), strengthening health services (Multi-lateral Initiative on Malaria (MIM), public advocacy/education (Alliance for Microbicide Development) or regulation and quality assurance (Pharmaceutical Security Institute).

According to Hanlin (2006) "PPPs are seen as mechanisms that reduce transaction costs, increase collaboration and build trust in a way that will provide a mechanism for vaccines to be developed," (2006: 20). Chataway, Hanlin and Smith (2005) suggest that PPP's "are seen by some as a way of overcoming the crisis of 'neglected diseases' and the fact that 90% of the world's spending on health related research benefits only 10% of its population." (2005: 1). Advocates argue that in the PPP pipeline are: 8 diagnostics, 45 new drugs, 8 microbicides and 50 vaccines in development. It is said PPPs also contribute to local health and research infrastructure and help make progress toward Millennium Development Goals of health for all (see 'Open Letter to the G8,' 2005). However, Chataway, Smith and Wield (2005) argue that PPPs only offer the potential for advantageous vaccine development if they operate and are understood in particular ways. They suggest, for example, that PPPs should focus on a broad range of innovations, not just the science of vaccines. Innovation for PPPs should also include capacity building, ways of working in developing countries, establishing local centres of expertise, ensuring efforts are sustainable and relevant beyond the BRIC countries (Brazil, Russia, India and China) which usually receive attention.

Further concerns are raised regarding the nature of the 'partnership' implicated in PPPs. Widdus (2003) suggests: "True partnership is really about combining different skills, expertise and other resources — ideally in a framework of defined responsibilities, roles, accountability and transparency — to achieve a common goal that is unattainable by independent action." (2003: 3). However, Buse (2004) raises concerns regarding inequality between partners, with developing countries bringing populations of sick people to the table (who are not considered a resource) and large pharmaceutical companies bringing expertise, possibly the means of distribution and possibly finance to the table. Both Hall, Bockett and Taylor (2001) and Sundaram and Holm (2006) look to the use of terms such as interactions, alliances or collaborations as an alternative to partnership. Yet such a change in terminology does not address the issue of unequal partners if it is perceived as a problem in PPPs (Buse and Waxman, 2001). Indeed the ways in which developing world 'partners' have been incorporated into PPPs raises problems for Hardon (2001) who suggests PPPs involve: "reinforcement of donor dependence, a skewing of health programs, a large emphasis on creating markets, the weakening of UNICEF's independence, a lack of sustainability for traditional vaccine suppliers and technology transfer, greatly reduced transparency, and limited involvement by developing countries and consumers," (2001: 21). Hayes (2001) further suggests that "there are huge differences in the quality, sustainability and power relationships of the types of co-operation now all being labelled as 'partnerships'," (2001: 4). Rundall (2001) argues that private partners in PPPs "aggressively advertise their links with charities and good causes in order to counterbalance bad publicity," (2001: 23) building surplus good publicity in case of a crisis ahead.

Further problems for PPPs are noted by Nishta (2004) who suggests that ethical challenges include: a lack of global norms and principles shared between partners, private firms may re-orient public sector health care, the possibility that local state care will be withdrawn in anticipation of PPP outputs, a conflict of interest between partners, international efforts may ignore specific local issues, health systems may be fragmented (as PPPs chase easy wins, such as easily accessible segments of the local population), there may be a need for common goals and there might need to be a focus on outcome (not just how to work). Sundaram and Holm (2006) suggest more research is required on PPPs, while Chataway, Smith and Wield (2005) argue that research assessment (such as the UK's RAE) acts as a disincentive to UK researchers to pursue practical research on PPPs' effectiveness (as the RAE stresses academic publications and development journals are not considered highly).

Oechler (2004) warns PPPs are not a "magic solution," (2004: 32). In Caines and Lush's (2004) research, the participant countries showed: no capacity to assess IP; limited involvement of health policy makers in trade negotiations; little support from international organizations on IP issues; lack of capacity to register/enforce brand drugs; little trust between government and pharmaceutical companies; confusion over whether one policy (say discounting) ruled out another; little means to secure best prices on existing drugs; little means to compare effectiveness of drugs; and limited information from international organizations on prices, quality, sources, and utility of different drugs. However, they conclude that excluding private firms is unrealistic as a way forward in vaccine development.

If PPPs remain the most appropriate way forward for vaccine development, how might some of these issues be tackled? Buse (2004) suggests that developing countries should have reserved seats on PPPs (as is the case with GAVI) and that:

"Access to timely and relevant information about decision-making is essential to enable stakeholders to hold an organization accountable and to enable participants and representatives to make meaningful contributions to the deliberations," (2004: 236).

To understand governance, Buse argues we need to develop further insights into: legitimacy: particularly is governance considered legitimate by those subject to it; representation and participation: notably are those governed involved in decision making?; accountability: are those involved in decisions and outcomes available to be held to account; transparency: "the extent to which information pertinent to decision- and rule-making is freely and readily available to those affected," (2004: 230); we also need to ask are governance arrangements sustainable?; and do governance arrangements operate in a particular context (most PPP secretariats are 'based' in Geneva or the US and questions are raised regarding the importance of these locations). In sum, Buse (2004) suggests we need to understand PPPs' "authority, representation, accountability, transparency and oversight," (2004: 226).[9]

Summary

In sum, problems for effective intervention in the disease burden of the developing world and the building of optimal vaccination programs are multiple. Research suggests that vaccinations involve issues of:

- Vaccine development (some diseases have no vaccines yet, some have vaccines, but price and quality is difficult to control)

- Education (sometimes effort is required to provide a sufficient number of vaccine administrators, sometimes a local population requires convincing of the value of vaccination)

- Finance (for the development and purchasing of vaccines)

- Infrastructure (for local delivery, for local, sustainable vaccine research initiatives, for administering vaccines)

Various interventions have been attempted, but each of these interventions is said to involve further problems:

- Tax breaks to encourage pharmaceutical firms to invest in research and development, targeting diseases of developing countries (however, tax breaks do not cover many of the vaccination problems)

- Extended patents which would enable firms to distribute their profits over a longer period reducing the cost of each dose (except that this does little to enhance quality, may lead to lock in around a sub-optimal drug and there appears little interest in a broad change in patent legislation)

- Advanced Purchase Commitments (APCs) which would guarantee a price for particular vaccines up to a certain maximum value, providing a market for less

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[9] Buse (2004) is not alone in voicing such governance and accountability concerns. Similar points are made by Nishta (2004) and Widdus (2003). Garner (2005) goes a step further in suggesting that we need to develop "consistent, transparent and workable policies and criteria for closing down partnerships that are unlikely to succeed" (2005: 7).

marketable diseases (however, it is argued that this simplifies the science of vaccinology, simplifies notions of markets and simplifies the kind of problems faced in vaccination)

- Public Private Partnerships (PPPs) which draw together private firms with public bodies to work together, in a long-term, sustainable manner, addressing a broad range of issues (except that questions of control, inequity, ethics, effectiveness, ways of working, accountability and transparency continue to come under scrutiny)

Despite the number of problems invoked when discussing vaccines, most research still advocates pushing forward with PPPs. The principal questions raised by pushing forward in this way involve PPP ways of working, accountability, transparency and issues of equity. These questions will be addressed in the next section on 'Case-Studies and Accountability.'

ELECTRONIC WASTE

Background

Europe

Since the early 1990's, electronic waste has formed an increasingly prominent focus within broader discussions regarding concerns in escalating amounts of waste and problems with waste management. It is suggested that the UK produces around 1million tonnes of electronic waste per year (Guardian, 2002) and the European Union produces 6.5million tonnes. E-waste is growing three times faster than any other waste stream (SVTC, 1999) and the usable lifespan of electronic products keeps shrinking (average electronic lifespan used to be eight years, now it is down to two; SVTC, 1999). However, although much of the broader debate centres on the bulk or weight of waste (for example, how much households throw away, the apparent lack of space for landfill, the need to recycle or reuse to limit waste bulk and save space), e-waste does not occupy a large proportion of waste weight (perhaps around 1% of waste, CEI, 2005). This has led some to argue that e-waste is a small problem, on which we should not pass legislation which may in any case restrict economic growth (CEI, 2005). Yet for some size in this case does not appear to matter. In place of a focus on size, much of the discussion on e-waste is focused on toxicity — the concentration of metals and plastics in electronic goods which can become harmful when attempts are made at disposal through burying e-waste (landfill), burning it (incineration, sometimes for energy generation) or dismantling it and re-using component parts or raw materials (recycling). This debate on disposal toxicity forms one of three areas of e-waste concern, the others being the production of electronic goods (the materials used, the energy used in production) and energy consumption in usage of electronic products (and how this might be reduced). The debate on e-waste has led to the development of the Waste Electrical and Electronic Equipment (WEEE) directive and Restriction on Hazardous Substances (RoHS) directive (see 'EU legislation' below).

US and Japan

Despite several attempts (Government Technology, 2006) the US has yet to pass national legislation on e-waste. Several states (ES&T, 2006) have passed legislation which impels producers of waste to take responsibility in partnership with local authorities for the collection, recycling and/or disposal of electronic waste. Major technology producers such as HP have campaigned against state level legislation which might require different actions in different parts of the country and favour those companies focused in some states rather than others. Much of the concern in the US has focused on the costs of locally handling e-waste. It is said that shipping a monitor to China for 'recycling' is ten times cheaper than recycling it in the US (SVTC, 1999).[10] This situation is noted (Wired, 2003) as being further behind in e-waste action than both the EU and Japan. In the latter, it is suggested that each of the three areas of concern are further developed. For example Matsushita have put into

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[10] This is tied into a broader trend of low cost shipping from the US to China. High levels of exports from China to the US have resulted in an excess of capacity (and hence low costs) for shipping containers travelling in the opposite direction.

production 100% recyclable electronic products and IBM has produced (very expensive) goods made from 100% recycled plastics. Furthermore, the collection and disposal of technology is under way with producers taking responsibility for their products (BBC, 2003). Initiatives that have begun in the US have not always met with positive PR. Dell's attempts to recycle technology components through the use of prisoners as cheap labour, met with protests regarding lax health and safety standards (see New Standard, 2006; a Dell spokesperson countered that prisoners were being given the chance to recycle their lives alongside the PC's; Wired, 2003). The US currently landfills around 4.5million tonnes of e-waste per year and somewhere between 50-80% of e-waste collected for recycling is sent to China, India or Pakistan (Wired, 2003). Uncertainty in these figures derives from companies' unwillingness to publicly declare their recycling success/failure. There have also been concomitant problems with paper audit trails of waste which leave one port in one country labelled as one thing and arrive in another port labelled as something else. The extent to which labels match the content of shipping containers is uncertain (BBC, 2005c).

Developing world

This mass movement of e-waste collected for recycling to the developing world introduces problems for those countries. For example, under Indian law, PC's are not treated as hazardous waste, but are instead termed donations or recyclable goods (BBC, 2005d). Some of the donated equipment is said to be no better than scrap (EHP, 2006) and some of the recyclable equipment or components are difficult to get at, with processes of recovery posing threats to the environment (BBC, 2005e). It appears that once in India, these technologies join a growing mountain of obsolete equipment from rapidly expanding technology centres such as Bangalore. 'Recycling' e-waste in India involves hundreds of small-scale, local initiatives involving possible exploitation of cheaply available/exploitable labour and producing waste by-products which appear set to do long-term damage to local environments including agriculture, waterways and fish populations (India Together, 2003). A similar picture is apparent in China where components of PC's are cooked by locals in woks in order to separate out raw materials (after which some materials are simply dumped on the ground; New Scientist, 2002). Although many of the components are deemed toxic by the World Health Organization (see Ban, 2002), it is not clear whether further damage is done to local inhabitants and their environments by the combined cooking and dumping of toxins (SVTC, 1999; Ban, 2002). What counts as toxic has been a matter of recent contention with the dumping of waste in the Ivory Coast killing seven people and injuring 40,000 whilst the company responsible claimed the waste was not "intrinsically" toxic (BBC, 2006a).

EU Legislation

In response to concerns regarding increases in the e-waste-stream, the toxicity of such waste and its shipment to parts of the developing world, the EU has developed two directives. The first of these is the Waste Electrical and Electronic Equipment (WEEE) directive. This directive includes three principle aspects: first, manufacturers should minimise the toxicity of electronic products (through, for example, using two types rather than twelve types of plastic); second, manufacturers should focus on minimising energy consumption in product development; third, under the principle of

Extended Producer Responsibility (EPR), manufacturers should be in a position to 'take back' (i.e. provide a basis for recycling, even through a third party) products from users. EPR is an extension of the polluter pays principle and is enshrined in the European Union's Fifth Environment Action Programme. The costs of 'taking back' technology can be met through product price, systems for take back should be operated with nation state governments and producers may gain competitive advantage by producing products that are easier to recycle which will cut down the cost of take back schemes.

There are ten categories of e-waste:

1. Large household appliances

2. Small household appliances

3. IT and telecoms equipment

4. Electronic and electrical tools

5. Consumer equipment

6. Lighting

7. Toys, leisure and sports equipment

8. Automated dispensers

9. Medical devices

10. Monitoring and control devices

This aspect of the WEEE directive does not appear to reduce the movement of e-waste to the developing world nor guarantee that the e-waste recycling conditions in the developing world will improve.

The second area of legislation is the Restriction on Hazardous Substances (RoHS) directive. This suggests that no goods (from the first eight categories of the WEEE directive) should come onto the EU market after July 1st which contain: heavy metals (lead, mercury, cadmium, hexavalent chromium) and flame retardant plastics (polybrominated bipheryls (PBB), polybrominated dipheryl ethers (PBDE)). Each of these materials should make up no more than 0.1% of products except for Cadmium which should only make up 0.01% of products. There are some exemptions to this directive such as the repair of equipment and goods used to repair old equipment (i.e. equipment produced prior to July 2006). There are also numerous grey areas in the legislation so that radios for example are e-waste, but car radios are not (because they are treated as a fixed attribute of the car). Microwave ovens are e-waste, but if installed in commercial kitchens their status is less clear (because they may be a fixed attribute of a commercial industrial setting in the same way that pipes are part of an oil rig and are not e-waste). Batteries are neither e-waste nor a hazardous substance, but if they are left in electrical goods by consumers, they must be 'taken back' by the producers of the product. However, once 'taken back' batteries are still not considered hazardous and so the minimum acceptable standard of treatment for batteries is that they are taken out of e-waste products (after which producers can do more or less what the like with them, until the proposed EU Battery and Accumulators directive comes into being).

Implementation

The area of e-waste legislation initially focused on the UN development of the Basel convention (1989) which attempted to limit developed nations' export of hazardous materials to the developed world. This convention has been through several iterations without the US as signatories. The convention does not cover 'recyclable' material. Draft versions of the EU directives were written in the late 1990's and became law in February 2003. However, changes were made between the draft and final stages. Several aspects of the directives were reoriented from demands to suggestions. For example, after extensive lobbying by US technology firms, the RoHS directive no longer contained the rule that all new PC's should be made from 5% recycled plastic; instead manufacturers would simply be encouraged to use as much recyclable material as possible. Subsequent to the legislation being recognised by the EU in 2003, it was expected member states would adopt the directives into domestic law by August 2004 with the first collections and recycling of e-waste carried out by December 2006. However, by summer 2004, 24 out of 25 member states had failed to satisfactorily incorporate these directives into law (Greece was the only member state to have satisfactorily responded to the directives). In the summer of 2005 the EU threatened action against the UK along with Estonia, Finland, France, Italy, Malta and Poland for failing to comply with the directives (ZDNet, 2005). The UK's DTI continued to promise compliance, however the date for such compliance has frequently shifted (from 2004, to July 2005, to January 2006, to June 2006). The RoHS directive has now come into force in the UK, but the WEEE directive has been deferred once again with the UK government promising to finish its latest industry consultation by December 2006 (with legislation coming into force sometime in 2007). The EU expects the UK to be already collecting around 4kg of e-waste per capita.

It still seems unclear if the DTI has the necessary recycling infrastructure in place and agreements in place with industry for the WEEE directive to be enforced (DTI, 2006). However, there is a growing number of profit and not-for-profit organisations focused on providing the means to dispose or manage the recycling and re-use of e-waste. These organisations include charities (such as Digital Links, 2006; Donate a PC, 2006) and for profit firms (such as PC Disposals, 2005; CCL North, 2006; WeeeCare, 2006; e-cycle; 2006). For profit firms vary in their views on e-waste. WeeeCare suggest they can offer companies an easy solution to "The continued onslaught of yet more waste management regulation on industry," (WeeeCare, 2006), while PC Disposals on the other hand emphasise the environmentally friendly aspects of their PC recycling service and e-cycle focus on the ease and security of their service. The latter point has been picked up in relation to charitable PC donations, where it is said that in West Africa for £15 one can purchase 17 hard drives containing a former owner's sensitive, personal information such as their banking details (BBC, 2006b). However, ActionAid have suggested that the problem for charitable donations of PC's is not that they contain sensitive information (it is said this can be wiped to MoD standards by a reputable charity). The more significant problem, ActionAid suggest, is that many homes in Africa do not have electricity or network connections. Putting a desktop on a desktop is one thing, but making it work is quite another (BBC, 2004). This has not stopped 23,000 tonnes of electronic waste (around 750,000 PCs) being exported from the UK to the developing world. Digital Links argue that these donations can transform the lives of those in the developing world (and cite the example of a Gambian carpenter who used the IKEA on-line catalogue to start up a

Swedish-esque flat-pack furniture business; BBC, 2004). Action Aid argue that pens and paper might be more useful educational aids (BBC, 2004).

It is predicted that some technology firms will look to achieve economies of scale by entering into a competitive market, tendering for e-waste management while others will seek to keep control of electronic goods by running in-house waste management services (Out-Law, 2006). In the UK, government responsibility for e-waste negotiations with producers will involve Defra and the DTI. Monitoring and enforcement will be carried out by Trading Standards, the Environment Agency and local authorities. Funding will be shared between Defra, HMT, ODPM, DTI and grants will be managed through WRAP (Waste Resource Allocation Programme) (Defra, 2005).

Research on Waste

There has been very little research carried out on electronic waste specifically (recent, notable exceptions include the work of Grossman, 2006; Saphores, et al, 2006). Research on waste more generally has focused on issues of rubbish and disposal (Chappells and Shove, 1999a, 1999b; Douglas, 1984; Hawkins, 2000; Hetherington, 2002; Munro, 1998; Strathern, 1999; Strasser, 2000; Thompson, 1979). This research raises questions of: what counts as rubbish (Thompson, 1979); how the history of disposal has developed (Chappells and Shove, 1999a; 1999b); how we come to terms with throwing things away (Hetherington, 2002; Gregson, 2005); how we understand re-use (Strathern 1999); attitudes towards composting (Tucker, 1999); and the role of community waste projects in influencing household behaviour (Sharp, 2005). Wynne (1989) highlighted the problem of the mass movement of hazardous waste from the UK and around Europe to elsewhere in the world. However, it seems that new legislative forms, the specific case of e-waste and the toxicity of e-waste may pose new and distinct questions.

Summary

The problem of e-waste involves issues of energy and material usage in the production of electronic goods, energy use in electrical good usage and what to do with electronic goods at the end of their ever decreasing lifecycle. Burying, burning and dismantling of e-waste each present their own problems. Burying is said to impact upon land, burning produces polluting emissions and dismantling comes with high costs and complex processes. High dismantling costs have led to exports of e-waste to areas with available low-cost labour forces, notably in India and China. However, there is little control over the conditions under which dismantling operates and the effects on local people and land. Re-use initiatives (mostly through charitable donations to the developing world) have also run into problems. 'Donations' are sometimes useless (in that the goods donated do not work or there is no infrastructure in the local area to support working) or some shipping containers labelled 'donations' might be more accurately labelled 'waste.'

These problems can be thought through in terms of accountability relations. How can e-waste move from place to place in a way that ties together producers, retailers, consumers, sometimes local authorities and the means of dismantling/disposing/re-using (including, for example, disposal firms, charities, shipping companies and governments)? How can these accountability relations be established in order to

ensure that producers do take responsibility and that e-waste is handled effectively? What would count as the most effective way to handle to e-waste? Should consumers take greater responsibility for their use of technology? Would retailers ever take an interest in getting people to use less technology, less often, using fewer resources, with each item of technology having a longer shelf-life? These questions will be taken up in the next section on 'Case-Studies and Accountability.'

CASE-STUDIES AND ACCOUNTABILITY

Approaches to accountability

This report introduced three ways of addressing accountability. First, accountability in public was used to refer to those moments of accountability in which people are co-present and hold each other to account in order to constitute a sense of what the other is doing, saying, etc. This form of accountability is considered pervasive and a constitutive feature of social interaction (in that, for example, without holding each phrase in a conversation to account, we can not make sense of the conversation or continue a sensible social interaction). The notion of public built into this form of accountability is mutually accessible sense-making. This version of accountability does not limit itself to mundane occasions of interaction, but is also invoked in various professional contexts where inter-actors might hold each other to account in order to make sense of the interaction in which they are taking part. This professional accounting might involve the invocation of various forms of expertise, knowledge claim, past experience and so on in justifying understanding an account in a particular way. The problem I suggested with this form of accountability lies in its pervasiveness. It is not clear what would not count as accountability in this approach.

Second, accountability of public was used as a focal point to discuss the variety of means through which various groups are accounted for by specific mechanisms (or technologies) of accountability. Here technologies of accountability were considered through which groups outside of those operating the technology could be deemed 'public' (and thus in need of no further examination) or a variety of forms of 'not public' and thus in need of closer scrutiny. Security systems in airports or CCTV camera systems would form classic examples of this type of accountability. I suggested two alternative approaches for thinking about these mechanisms of accountability. Foucauldian and neo-Foucauldian inspired approaches could be used to look at the ways in which individuals might pick up on particular rationales for action communicated by the accountability system. The individual would then attempt to act in accord with this rationale and be assessed for the extent to which they have adequately demonstrated this accordance. This is termed internalisation. For example a speeding driver might notice a police officer and understand that he or she should slow down and demonstrate they understand the speed limit while under the assessing gaze of the police officer. I suggested that the problem with this approach lies in the nature of the concept of internalisation. It is not always clear how an individual might pick up on a rationale, incorporate that rationale into their actions or be assessed in accord with that internalisation. An alternative means of engaging with this form of accountability, I suggested, was to look at Actor-Network Theory (ANT) as a means for analysing technology in detail and considering the detailed interplay of people and technological systems. The advantages of ANT I suggested could be found in interrogating multiple people and technologies involved in mechanisms of accountability and in moving away from a focus on individuals and internalisation.

Third, accountability for (and on behalf of) public was used to group together recent concerns regarding organisations demonstrating their social, economic and/or environmental responsibilities. Such demonstrations often operate (or calls are made for demonstrations to operate) through forms of transparency review, audit or other

accountability mechanism. The suggestion is made in this form of accountability that through making more information available, more informed judgements will be made about the organisation and organisations will be placed under greater pressure to acknowledge their responsibilities through knowledge of impending, future accountability measures. Problems with this approach include: making information available does not necessarily result in that information being uniformly understood by all readers; organisations may choose to make information available on certain topics, but there is no certainty that the information is reliable; organisations may become expert at producing information which fits the auspices of a particular accountability mechanism, but this does not entail opening up the internal workings of the organisation to render it transparent; often it seems that something justified as a 'measure' actually operates as a 'target' to aim toward, ushering in quite a different relationship between the means of accountability and organisational activity; it is not clear that the 'public good' invoked as a justification for these forms of accountability has much interest in the information made available. It may be the case that information made available under this form of accountability is only read by a narrow group of people and often used on behalf of a narrow interest. Both the sense of 'public' and the sense of 'good' could be held up to greater scrutiny.

The report will now turn to each of the case-studies in turn in order to consider how these forms of accountability can be used to understand the research presented which related to textiles, vaccines and e-waste.

Textiles

The research presented on textiles suggested a variety of problems with the global textile trade. This included mass movement of goods, attempts to protect domestic markets from imports, exploitative labour relations and potential problems with the industry of textile donation. One way forward proposed for textile trading was Fair Trade initiatives. These relied on a form of *accountability through certification.* Systems of Fair Trade certification involved all three areas of the accountability literature. Inspectors would go to potential producers in the developing world, along with traders and manufacturers, holding them to account in face to face interviews (accountability in public) as well as auditing their on-going financial and social investments through self-reporting of organisational activities (accountability of public). As this report has suggested, each of these forms of accountability can be open to interrogation. To what extent does the sense made by inspectors of complex trading conditions constitute a reliable record of what has gone on in Fair Trading? How far do these accountability mechanisms manage to change things for people in developing countries (given that, for example, a tiny percentage of the money a consumer spends on a Fair Trade item actually gets back to the producer)? These questions will be taken up in the next section.

Certification also involved forms of accountability for public. Firstly, Fair Trade organisations would attempt to render the entire trading system transparent, providing information for producers, traders and manufacturers. This transparency was justified on the grounds that producers in the developing world had previously been at a disadvantage through lack of access to markets and lack of access to information over, for example, what would count as a suitable price for their goods. Secondly, Fair

Trade certification was also designed to give consumers satisfaction that they were consuming something for the good of the developing world while also making a statement about the kinds of things they cared about. This certification and accountability for (and on behalf of) public was designed to introduce what might be termed trust at a distance for consumers. Questions regarding this form of accountability, as this report has suggested, are many. The extent to which any form of transparency matches with the internal activity of organisations can be held up to scrutiny. Do Fair Trade organisations simply encourage reporting information on particular activities whilst other actions are left unaccounted for? Once measures are in place, do producers or traders simply attempt to produce as much information as possible to match what they perceive are expectations of that measure? What is the reliability of a Fair Trade label actually meaning that every aspect of a good has been produced fairly (and according to whose definition of fair)? Does every consumer have the same notion of what should count as Fair in purchasing Fair Trade goods? Do these accountability systems enable assessments of 'fair' while maintaining commitments to current models of 'trade'? These questions will be taken up in the following section on Research Design.

Vaccines

The research on vaccines primarily looked to Public-Private Partnerships (PPPs) as the way forward for developing new drugs and overcoming the variety of different obstacles to vaccine development in the developing world (including the apparent absence of profitability in diseases of the poor, problems with infrastructure and education, delivery and vaccinology). PPPs proposed a form of *accountability through partnership*. Under the PPP model (although there are a variety of different possible models), according to the research presented, partnerships would operate in a face to face mode of accountability. Although this operation would mean that each partner was available to hold the other partners to account problems seemed apparent in the absence of any means to make the PPP accountable beyond the partners. There was a kind of narrowly proscribed accountability in public, where partners could hold each other to account, but the form of 'public' involved was limited to partners. Various researchers suggested greater transparency was required in order to render the PPPs accountable (including how they work, the terms on which they invite new partners, whose interests prevail, etc). Although partners could hold each other to account, there was little accountability for public. However, as this report previously suggested, successfully rendering an organisational form publicly accountable is very difficult. Furthermore, vaccine developments also involve accountability of public; those populations deemed targets for vaccination would need to be monitored, assessed and accounted for according to their potential sickness, benefit from the vaccine, receiving of the vaccine and so on. These notions of accountability pose questions which will be taken up in the next section.

A further problem with some PPPs was that although partners could hold each other to account, not every interested party was able to be a partner. Often countries of the developing world did not play an active part as members of PPPs. This seemed to lead to the 'Developing World' being made and maintained for the PPP through accountability relations. The PPPs involved various forms of accountability relations between the different partners and these relations produced a version of the

'Developing World.' However, this version did not envisage the 'Developing World' as any of the Ps — it was neither conceived of as public or private or (often) as a partner. Instead PPPs positioned the 'Developing World' as beneficiaries of the PPP, an accounting term delineating non-active involvement in processes which maintained the accountability system and produced decisions regarding the form a benefit and beneficiary would take. In this way the accountability system kept the 'Developing World' from having an active voice in the PPP and instead positioned the 'Developing World' as grateful recipients of the 'wisdom' and 'generosity' of the PPP. The accountability system made and maintained a social order which positioned who could and could not contribute to the running and decision-making of the PPP and who would be grateful for receiving outputs from the PPP (whether they wanted them or not). The question to be taken up in the next section then is what alternative versions of PPP accountability might be conceivable?

E-waste

The research presented on e-waste outlined the growing problem of electronic equipment having ever shorter life-spans, being dumped at greater pace, often travelling to countries in the developing world with consequences for local environmental pollution and for local people employed to dismantle the waste in hazardous labour conditions. The research looked to new European Union directives as the way forward in reducing these problems through reduction in the toxic contents of goods, reducing the energy consumed by goods, encourage re-use of goods and establishing systems through which producers of goods should take back electronic items and dispose of them responsibly. In order to enforce this extended producer responsibility take back scheme, the directives propose holding to account the audit trails of electronics producers. This will result in a form of *accountability through audit*. The form this audit system will take involves information on producers and the goods they have produced (including how old the goods are), how they will go about collecting the goods (whether through their own take back scheme or an intermediary firm), what has happened to the goods taken back (where they have been collected, where they have been taken to) and proof that they have been dismantled responsibly. These directives do not prevent electronic waste from moving to the developing world, but do put in place rules on how that waste should be treated.

This audit trail of the production, consumption and movement of electronic goods engages with both accountability for public, and accountability of public. In the latter case it is the producers of electronic goods who will be the public to be held to account through this new audit mechanism. Audit trails and information on the extent to which producers successfully manage to take back goods from consumers will then be made available for public to hold these producers to account. The system is designed to render producers aware of their responsibilities through the threat of enforcement and negative publicity regarding any potentially unethical behaviour. However, once again questions can be asked about the integrity of this accountability system. First, to what extent are paper trails relating to shipping containers which move from port to port around the world reliable evidence of the content, final destination and final usage of the content of shipping containers (previous exposes suggest these audit trails are weak)? Second, in what ways will consumers relate to this form of accountability? Third, what implications might this system have for the developing world (it will not necessarily reduce the amount of electronic waste that

ends up in the developing world and will the system be in a position to introduce change)? Similarly, some countries termed developing (such as India and China) are heavily involved in producing their own electronic waste — what will the relationship (if any) be between developing and developed country waste? These questions will be addressed in the following section on Research Design.

Speculative ideas on accountability

Having looked at each of the case-studies and their involvement in modes of accountability, I will now present some speculative ideas on possible accountability themes which could be explored in subsequent research. These forms of accountability are an amalgam of accountability themes from my own previous research and from the research presented in this report.

Accountability shift

In my recent research on CCTV camera systems (Neyland, 2006) I noted that staff operating the equipment would often pass information on to the police in order to shift responsibility to the police for holding to account the town in which they worked. This was deemed unproblematic by CCTV managers who thought the police were the appropriate authority to take on such accountability. However, other accountability shifts can be more problematic. For example, in complex chains of accountability (such as Fair Trade certification of supply chains or electronic waste audit trails) one might find a constant shifting of responsibility to elsewhere in the chain. Expectations that such shifting of responsibility is possible might reduce the effectiveness of any proposed enforcement through accountability.

Accountability drift

In looking at the range of different actions involved in any situation, it can often seem as if there are only certain areas of that activity which get closely scrutinised. This forms something like an accountability drift, with all the scrutiny, regulation and attention paid to one set of actions while other actions are deemed less worthy of attention. In the example of Fair Trade certification, environmental accounting is focused on local pollution in production situations, while no attention is paid to the miles travelled by produce from the developing world which might cause its own environmental impact. Accountability appears to drift into one set of activities and away from others. It would be difficult for Fair Trade certification to cut down on miles travelled by produce; there seems little prospect of altering the environmental accounting bottom line in Fair Trade goods. Greater attention might need to be focused on this uneven distribution of accountability relations.

Accountability switch

Accountability measures often involve a switch in the nature of the accountability relations purported at the outset of measurement. An example of this can be found in UK academic accountability relations such as the Research Assessment Exercise (RAE). The RAE was designed to measure the outputs of academics by assessing mostly journal articles. This had the effect of many academics focusing their activities

on publishing as many articles in top-rated journals as possible, while other potential activities slipped out of focus. This generated a rapid accountability switch from measuring outputs to aiming toward particular targets. We may see something similar in our case-studies; once measures are established they quickly switch to targets.

Accountability trust

Making available information relating to a particular organisation, practice or product through a system of accountability can be designed to enable trust at a distance. Taking the example of electronic waste, the consumer should be able to return electronic products through the producer to be disposed of responsibly. Through a process of auditable procedures and labelling, the consumer should be assured that their product will not cause any harm. The consumer is thus invited to enter into a trust relationship with the producer at a distance from the eventual site for disposal of the technology. It would be interesting to see how this trust at a distance operates.

Accountability narrowing

My recent research on recycling included an analysis of the mechanism by which householders' recycling activity is held to account (Neyland, Wong and Woolgar, 2006). This research suggested that the mechanism involved narrowing the field of accountability from the broad range of messy features of householders' day to day recycling activities (trying to remember what to put in their recycling box, where to put it, when to put the box out, putting the wrong things in the box, dumping things in neighbours boxes, problems faced by recycling collectors) to a straightforward set of numbers which did not incorporate this range of activities. Narrowing accountability through the selection of a small number of metrics to be assessed can produce quite a different representation of activity from, for example, ethnographic research which tends to do the opposite and problematise the messiness of everyday life. Another means by which accountability can be narrowed involves questions of who gets to hold who to account. In the vaccine research we saw suggestions that those from the developing world were often not incorporated into PPPs as partners and so accountability narrowly occupied those 'in' the partnership.

RESEARCH DESIGN

This section will first outline how the research will operate in each case study. Second, it will suggest ways in which these case-studies can be brought together.

Methodology

The research will utilise a combination of interviews and trips to field-sites in order to provide a form of engaged ethnographic research. This style of research involves three principle components. Firstly the research involves getting close to the action of the particular subjects under study. This usually involves a combination of semi-structured interviews, observation (detailed watching and recording of what goes on) and forms of participation (in an attempt to gain an accurate rendition of what operating in the field setting involves). Secondly this research will incorporate attempts to gain feedback from field-sites regarding the value and utility of the research. This can be very useful for building the research project's direction, coherence and value for the communities studied. Thirdly this approach to research involves innovative attempts to engage with broader constituencies linked into the issues under study. These moments of engagement offer the opportunity to communicate some important features of the research and gain active participation in the research from potential users in (previous attempts at engagement have involved forms of joint authorship between researchers and practitioners, workshops and focus groups). More detail on this methodology will feature in a forthcoming book (Neyland, forthcoming b).

Textile Research

At this initial stage it is likely that the participants will include NGO's, textile producers, retailers, consumers, organisations involved in Fair Trade certification. These organisations could include:

>   Clean clothes (http://www.cleanclothes.org/)
>
>   People tree (http://www.peopletree.co.uk/)
>
>   Fairtrade UK (http://www.fairtrade.org.uk/)
>
>   Sandbag (http://www.sandbag.uk.com)
>
>   Oxford Fairtrade coalition (http://www.oxfordfairtrade.org.uk)
>
>   Traidcraft (http://www.traidcraftshop.co.uk)
>
>   Ralper clothing (http://www.ralper.co.uk/)
>
>   Just Fair Trade (http://www.justfairtrade.com/garments.htm)

The research will draw these organisations together with the contexts of production for these textiles. The research will address the following questions:

- To what extent does the sense made by inspectors of complex trading conditions constitute a reliable record of what has gone on in Fair Trading?

- How far do these accountability mechanisms manage to change things for people in developing countries (given that, for example, a tiny percentage of the money a consumer spends on a Fair Trade item actually gets back to the producer)?

- Do Fair Trade organisations simply encourage reporting information on particular activities whilst others are left unaccounted for?

- Once measures are in place, do producers or traders simply attempt to produce as much information as possible to match what they perceive are expectations of that measure?

- What is the reliability of a Fair Trade label actually meaning that every aspect of a good has been produced fairly (and according to whose definition of fair)?

- Does every consumer have the same notion of what should count as Fair in purchasing Fair Trade goods?

- Do these accountability systems enable assessments of 'fair' while maintaining commitments to current models of 'trade'?

Vaccine Research

This research will begin with a further analysis of the reports available from key stakeholders (such as the EU and WHO) into the disease burden faced by developing countries and the possibilities offered by vaccination PPPs. This analysis will identify targets to be incorporated into the research through interview. The research will also involve getting close to the action of vaccination programmes to provide a detailed analysis of the issues faced in the day to day management of vaccination. Vaccine development organisations in the UK, US, Africa and Asia have already agreed to take part in this research.

The research will use this data to address the following questions:

- What alternative versions of Public-Private Partnership (PPP) accountability might be conceivable which draw together different contexts of vaccination in the developing and vaccine development in the developed world?

- How might developing world countries be given more of a voice?

- How might PPPs be rendered accountable?

- What would constitute a reasonable set of information for holding PPPs to account?

- Who would hold PPPs to account and to what ends?

- How might populations be rendered accountable for vaccination?

E-Waste Research

The proposed research will engage with this complex area of e-waste by drawing together the following participants:

European Commission (WEE and RoHS directives)

National government in the UK (DEFRA, Environment Agency, DTI)

Local government (recycling initiatives)

Electronic producers, users (corporate settings) and consumers (domestic settings)

NGOs (such as Greenpeace)

Producers (such as IBM)

Recycling organisations (charities such as 'Donate A PC' and firms such as 'PC Disposals')

The research will involve interview and observational work to get close to the action of e-waste, to note the movement of things through different settings and different types of use. The research will ask:

- How does e-waste move through different regimes of accountability?

- In what ways does this uneven distribution of accountability work against the developing world?

- What are the prospects for a more even redistribution of accountability?

- To what extent are paper trails relating to shipping containers which move from port to port around the world reliable evidence of the content, final destination and final usage of the content of shipping containers?

- In what ways will consumers relate to this form of accountability?

- What implications might this system have for the developing world (it will not necessarily reduce the amount of electronic waste that ends up in the developing world and will the system be in a position to introduce change)?

- Some countries termed developing (such as India and China) are heavily involved in producing their own electronic waste — what will the relationship (if any) be between developing and developed country waste?

Drawing the case-studies together

The data produced through the methodology outlined above will be coded according to the themes which regularly recur through the research. These themes will be based on the data collected. Analysis of the themes usually involves detailed analysis of specific extracts from the data. This is a form of grounded theory. Outcomes drawn from this research will involve a combination of presenting the themes (as a useful way of representing and engaging with the principle concerns in the area) and analysing the themes (often in terms of how the themes operate together and in this case what prospects for change there might be upon reflection). The outputs of the research will draw the three case-studies together. The outputs will include:

- A report on each case-study

- A framework of accountability issues across the case-studies

- Academic journal articles on development, inequality and accountability

- A joint report with our Portuguese colleagues on forms of accountability

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SECTION 2

Articulating new accountability systems and experimental initiatives in capacity building and priority setting with the aim of remediating inequality

Articulating new accountability systems and experimental initiatives in capacity building and priority setting with the aim of remediating inequality

João Arriscado Nunes, Marisa Matias, Ana Raquel Matos and Daniel Neves

Center for Social Studies
University of Coimbra, PORTUGAL

INTRODUCTION

The purpose of this section is to offer a partial framework for the study of initiatives aimed at addressing issues of inequality as they are related to the active engagement of concerned actors and public bodies and institutions.

Our starting point is the identification and characterization of procedures which allow public policies to be made publicly accountable for their effects on inequalities. The considered policies are those directly addressing science and technology (research, innovation), as well as those public policies "constitutively" involving the mobilization of scientific and/or technological resources or of specific kinds of expertise, as is the case of environmental, health, energy, transport or urban planning policies. The procedures targeted here are those which have as their stated aims the promotion of equality or the reduction of inequalities.

Engaging with this issue requires a detailed scrutiny of the concepts and approaches that the different areas of relevant scholarship have proposed and developed, but also an identification of the problems raised by the attempt at bringing them together within a single framework and a common research project. These include a closer examination of how approaches to inequality, science and technology, public knowledge and lay-expert relationships, democracy, accountability and the relationships between science/technology, the social and the political are (or are not) articulated and enacted in specific settings.

The overall design of ResIST project involves the definition of a common vocabulary and grammar for dealing with equality/inequality, science and technology and with other topics specific to the different Work Packages, as is the case, for WP3, of accountability. We shall refer to this approach as "grammatical", drawing on the work of cultural critic Kenneth Burke (1969) and following recent contributions to European sociology, such as those by Luc Boltanski and Laurent Thévenot (1991). These approaches may draw either on the identification of vocabularies and rules for producing certain types of statements as they can be abstracted from a corpus of theoretical or technical documents, or on a range of materials including accounts of experience of actors, documents, observation or historical materials produced through different forms of fieldwork or of empirically-oriented work. Workpackages, such as WP3, which are based on a commitment to a "grounded" approach to the themes dealt with by the project may be caught in a tension between the search for a common — or "integrated" - framework and the need to deal with a diversity of grammars arising from the engagement with different actors' definitions, accounts and performances as they emerge in specific settings and as constitutive of particular courses of action. The

"grounded" inquiry on the diverse vocabularies or repertoires of action allowing for the elaboration of situated or context-specific grammars is likely to generate tensions between the stated theoretical and conceptual aims of the project as a whole and the capacity to respond to the complexity of the field. This tension, however, may develop in productive directions, provided the very concepts that ResIST has defined as central to its design are put to the test of empirically-oriented approaches and of the diversity of grammars and repertoires emerging from them.

PUTTING CONCEPTS TO THE TEST

We shall start by an inventory of the questions that this approach raises in respect to the basic concepts of the project.

Equality and inequalities

How are equality and inequalities defined by participants? What counts as inequality? For whom? How does it relate to conceptions of justice? Which inequalities (or degrees of inequality) are seen as (in)compatible with justice as it is framed by actors? Should there be distinctions between inequalities related to problems of redistribution, of recognition and of parity of participation? How do actors frame and formulate these issues?

What difference does it make to:

a) focus on *inequalities*, their identification/description and analysis (regarded as the proper focus of social scientific work) and the reduction or mitigation of inequalities as they are linked to S&T as a policy objective;

b) focus on *equality* as the very condition of political action and as the main claim associated with the irruption of the "unaccounted for", of the emergent or "orphan" collectives in the public space?

Are there differences (and what are they) between promoting equality and promoting policies for the reduction of inequalities? How does the active promotion of equality as a key feature of political participation and of the irruption of the demos as a force (Rancière, 1995), i.e., as a condition of "naming" those that are excluded or unaccounted for in the formal political space, differ from policies or actions aimed at the reduction of inequalities which do not challenge the very existence and fairness or justice of these inequalities?[11]

Inequality versus difference

Some approaches to inequality have proposed a distinction between inequality and inequity. The former would refer to a descriptive approach, the latter to a normative approach.

A question that arises in relation to this distinction is whether all inequalities are undesirable or have consequences which are considered as negative. It doesn't have a simple answer. There have been proposals for treating inequalities as by definition implying consequences that are regarded as undesirable, whereas the notion of difference would allow for positive description of distinctions which would not be regarded as negative (Santos, 1999, 2001; Fraser, 2003).

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[11] An interesting reflection on these issues can be found in Panfichi and Chirinos (2002).

Political action aimed at addressing issues of inequality would be of a redistributive kind, whereas political action aimed at dealing with difference would be guided by recognition.

Science, technology and knowledge(s)

What do science and technology cover? High-tech, specialized knowledge? Emergent forms of scientific knowledge and technology? Knowledge in the broad sense, including scientific and technical knowledge as well as professional, local and everyday knowledge? Should technology include not only cutting-edge and emergent technologies, but mundane or broadly shared technologies as well? How do different participants define science, technology and knowledge?

Configurations of knowledge associated with situated responses to inequality should be regarded both as resources for processes of empowerment and capacity building of citizens as well as an aim of these processes (Santos, Nunes and Meneses, 2004)

Accountability

Conceptions of accountability which have gained widespread currency in the social sciences usually refer to the mediated relationships between those who govern and those who are governed. These conceptions are associated as well to a one-way frame of being accountable: the State, governments and political entities are supposed to be accountable to the public. This is the perspective followed by, for instance, Giddings (1995), who gives us an overview of Parliamentary accountability, or by Held (1996) or Peters (1996) and Spichal (1999) on broader approaches.[12]

Strictly speaking, and within the political culture of Euro-American liberal democracies, Government accountability is associated with the electoral process and Parliamentary accountability with the accountability of governments to parliaments. In the same line of thought, public accountability is associated to processes of governance, implying that their outcomes can be made transparent and that the public can examine both processes and outcomes of formal political action or of administration. A culture of public debate, freedom of information, access to information and mutual commitment of those who govern and those who are governed are the key-elements of this perspective. Another central issue to consider is that accountability procedures are mainly oriented towards representative systems.

Recent work on the democratization of Southern hemisphere countries, as those of Latin America, has brought to the fore other conceptions of accountability, largely based on citizen initiatives to make states, public officials and representative bodies accountable to those who elect them or whom they are supposed to serve. These initiatives include a broad range of experiments — from participatory fora and councils to institutional arrangements for the scrutiny of elections and of public office —, and, of course, forms of collective action configuring new types of public space. Much of the research on experiments in new forms of public accountability has contributed to the broadening of the very notion of accountability, so as to include more than electoral or legal accountability, often described as social control. It is

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[12] See also the contributions to the EC funded project PubAcc — "Analyzing Public Accountability Procedures in Contemporary European Contexts".

particularly interesting to notice that in Europe a good deal of the research carried out on this subject has addressed issues of accountability in relation to the implications of technological or scientific innovation.

How should these developments in work on public accountability be taken up in the context of this project and, in particular, in this Work Package?

LINKAGES TO CURRENT DEBATES

The questions outlined in the previous section bring to the fore the need to explore the links between the topics of ResIST and a number of current debates within the social sciences, as they are being conducted in different regions of the world, namely in those covered by this project. Four main areas of debate seem to be of particular interest to our approach in this WP: democracy, citizen action, accountability and the co-production of knowledge and social orders.

The debate on democracy

Current debates on democracy and on the problems of "democratizing democracy" include the following issues:

- the pathologies of democracy, specified as pathologies of representation and pathologies of participation;

- the attempts at articulating delegation and dialogism, as has been attempted in European countries, through extension of public consultation and deliberation and their incorporation into existing formal political systems;

- the dispute between a "low-intensity" model of democracy associated with neoliberalism and a democratic-participatory conception, which defines the current political dynamics of regions such as Latin America, but which seems as well, although taking different forms and drawing on different vocabularies (such as delegation *versus* dialogism or representation *versus* participation) to pervade current debates and political experiments in Europe and in North America.

For minimalist or "low intensity" conceptions of democracy, usually associated with neoliberalism, the assumption is that there is one inescapable, global model of economic organization which sets constraints to any political process, thus narrowing down the very possibility of choice which is claimed to be central to the competitive dynamics of this type of democracy. Under these circumstances, the definition of a set of formal, procedural rules and institutions that guarantee them are seen as constituting democracy. Accountability means, above all, electoral and judicial accountability associated with the respect for procedures and information to the public. Although outcomes (of policies, of government) should be relevant, the reference to constraints beyond the possibilities of political action actually reduces their significance. In fact, governing against an electoral program is often celebrated as evidence of "realism", "responsibility", etc. "Civil society" is reduced to a "third sector" which takes over many of the policies formerly associated with the state, all in the name of efficiency and cost-effectiveness.

For the democratic-participatory currents, the possibility of change based on the active engagement of citizens in public life means that there are possibilities of participating in the shaping of alternative modes of organizing economic and social life, and participation becomes a central issue in the dynamics of democracy, a means

of broadening and strengthening it. Accountability is based not just on following formal rules and procedures, but on outcomes as well, on how public institutions, governments and other actors actually achieve democratic aims. The creation of spaces for the engagement of citizens in the definition of policies and their assessment is a mode of articulating procedures and aims. The political philosophy of liberation (e.g. Dussel, 2001) provides some guidelines on the ways in which three key issues have to be kept together in this approach to democracy:

a) the horizon (of equality, justice, etc.) of the possibility of "another world". This approach takes equality seriously, in that it sees its achievement as a goal;

b) the parity or symmetry of participation, that is, the creation of procedures that allow heterogeneous actors to become active and engaged. This requires dealing with the heterogeneity of knowledges, speech skills, the creation of a diversity of public spaces, etc.

c) the definition of viable policies that take into account the situation, but never lose sight of the strategic horizon stated in *a).*

A crucial move here, inspired by a number of authors, ranging from Foucault (1975, 2004a and 2004b) to Santos (2006), Dagnino *et al.* (2006), and others, is to approach the state as the heterogeneous outcome of a complex history, which can be captured only through an archaeology of the state (allowing access to the different strata that have emerged at different historical moments) and a genealogy of the state through a reconstruction of the attachments that have allowed different parts of the state to emerge within specific configurations of links to a range of entities and actors. Experiments in the creation of new public spaces allow heterogeneous publics to meet, debate and eventually deliberate, and to engage with a similarly heterogeneous state, exploring the possibilities opened up by the convergence of political projects within this heterogeneous state and as they are enacted by societal actors. The issue of cognitive justice (which, in the language of STS, would mean engaging critically with the different versions and guises of the "deficit model"), is a crucial link between issues of social and political inequality and cultural and cognitive inequalities.

The debate on citizen action

Citizen mobilization and collective action play a very central role in promoting social and cognitive justice. Whereas the neoliberal model and the deficit model of public understanding of science treat collective action as a threat to or disturbance of the democratic order, the democratic-participatory approach treats it as the very condition of democracy, of the irruption of the demos in public space.

As various cases in Latin America show, democratization is dependent on the existence of a strong mobilization of society through associations or movements, but also on the convergences between political projects within both state and civil society (both conceived as heterogeneous configurations of actors, institutions, projects, processes, etc.).

In Europe, two broadly different approaches (variable across countries) seem to point towards diverse ways of relating the state and citizen action. In Northern European countries, citizens tend to be integrated into state-sponsored or -driven processes of consultation and/or deliberation, with variable outcomes as far as their influence on public policies goes. In Southern European countries, the principle of double

delegation (Callon *et al*, 2001) is enforced mostly through discretionary modes of governance, with some space for market and educational modes (the latter especially relevant for the creation of the new interactive subjects, as Andrew Barry (2001) has described them. Science museums and science centres play a very important role, here).[13] Protest and collective action, especially at the local level, become the main form of citizen engagement with public policies and their outcomes.

Whereas in the former model the notion of "upstream engagement" may contribute to displace the traditional distribution of roles and the very workings of accountability procedures as they are carried out within strictly delegative models, the latter is usually based on responses to policies at an advanced, often irreversible stage, thus shutting off citizens from any possibility of contribution to design or implementation of these policies. Conceptions of the expert/lay divide are correspondingly different, although in practice this correspondence cannot be taken for granted.

The debate on accountability

As far as the subject of this project and WP is concerned, accountability thus may either appear as a sort of "closed-circuit" set of procedures that involve only some groups or sectors (for instance, traditional peer-review in science, or internal accountability in administration, or professional accountability based on deontological codes), or be understood as involving "external" institutions or actors. There are, in turn, several ways of understanding it: through the mobilization of the judiciary or of regulatory entities, as happens with public institutions, and where the engagement of citizens is indirect and delegated; through the creation of specific institutions or bodies providing supervision of public policies and the action of the state; or through the creation of participatory spaces which allow citizens to engage directly, at different points, with the design, implementation and outcome of technologies, research programs, policies, etc.

Vocabularies of accountability may be associated with justice, law, ethics, sound science, religion, culture, economics/management, political responsibility, etc.

Criteria for accountability, as far as policies or actions addressing inequalities are concerned, should contemplate:

- inclusion;
- voice;
- empowerment/capacity building;
- binding power;
- redistributive effects;
- social control.

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[13] We are drawing here on the typology of modes of governance of science and technology proposed by Hagendijk and Kallerud (2003) as a contribution to the EC funded STAGE — "Science, Technology and Governance in Europe Project". The authors have identified a typology of modes of governance, which includes: discretionary governance, educational governance, deliberative governance, corporatist governance, market governance and agonistic governance.

The co-production of knowledge and social order

There is a limitation in most approaches to the democratic-participatory alternatives to neoliberal conceptions of democracy: the lack of adequate engagement with double delegation. The differences between political and cognitive delegation are not explicitly recognized in most accounts, so there is often an inadequate understanding of how a heterogeneous state, a heterogeneous civil society and heterogeneous spaces of science and expertise intersect and articulate configurations of projects and trajectories associated with the co-construction of the political and the scientific-technological. The challenge here is to extend, expand and complexify the critical approaches to democratization and political processes that have emerged since the 1990s, both in the North (namely Europe and North America) and South (namely Latin America). Crises that reveal the lack of response of the institutional architecture of double delegation to health and environmental hazards, to industrial accidents or to uncertainties associated with scientific and technological innovations are privileged entry points for the exploration of contested vocabularies, grammars and critiques of accountability (or failures of accountability).

The issue of how S&T modify this picture or complexify it should be central. The key role of mediations, such as different scientific and technological entities, health or environment, for instance, may be approached through, for example, ANT or co-productionist frames. The issue of accountability requires, here, that topics such as the emergence, coexistence, articulation or confrontation of civic epistemologies (Jasanoff, 2005) must be included as a key part of the study.

INNOVATIVE EXPERIMENTS

The question of inequality has often been included in general political programs or manifestoes or in policy statements. These references to inequality are often presented as if responses to inequality were to be regarded as outcomes of policies or actions with different aims and purposes. The reduction of inequality and any redistributive effects would be by-products of investment or growth.

In most cases, however, it is hard to understand how this issue can be addressed in such a way as to make it publicly accountable both in terms of its processes and in terms of its outcomes.

A range of initiatives that have emerged over the last decades have brought again to the center of policy and public action the need for specific interventions explicitly aimed at achieving redistributive effects and promoting capacity-building and empowerment among citizens. These initiatives are often local and they involve a collective mobilization and participation of citizens in different types of fora, deliberative spaces and collaborative research and action. Urban government and decisions concerning the definition and implementation of urban policies, debates and decisions of distribution of municipal budgets, collective mobilization and alliances with experts and officials to address health and environmental issues or different kinds of social problems provide exemplary instances of the potential as well as the limitations of action aimed at addressing inequalities and promoting redistribution in ways that are publicly accountable.

There are four conditions which have to be fulfilled for these experiences to have redistributive and empowering effects and may be evaluated through citizen participation and scrutiny. These four conditions are:

1) the definition of the strategic aim of addressing and reducing inequalities and actively promoting equality through citizens empowerment;

2) the design of participatory procedures characterized by symmetrical conditions of engagement of all those concerned or affected by the issues under discussion;

3) the definition of viable or achievable aims which can be subject to scrutiny and criticism of those concerned or affected and whose results can be evaluated for their outcomes in terms of redistributive effects and empowerment;

4) these processes require the development of a collective critical capacity which depends on the shaping of configurations of knowledge based on the articulation of different forms of expert and local knowledge.

THE CASE STUDIES

Case studies selected suit the four conditions previously identified. Two sets of cases were thus defined.

The first set includes a number of situations and processes across three countries and two continents, which allow for a detailed study of the ways in which accountability procedures are organized and enacted in relation to public policies with constitutive attachments to specific configurations of knowledge. These cases were selected from Portugal, Spain and Brazil.

Portugal offers a case of strict (though strongly asymmetric, since expertise is often subordinated to political agenda) double delegation (Callon *et al*., 2001), based on a predominantly discretionary approach to governance, "tempered" by educational, market and corporatist contributions, confined deliberation (Parliament, elected assemblies and bodies and some advisory councils) and faced with public protest, mostly at the local level, as the expression of agonistic responses to situations identified with injustice. Under these conditions, formal accountability procedures actually shut off citizens and are a matter for experts and officials. We shall explore some cases of experiments in mobilizing expert and local forms of knowledge in the context of participatory procedures, such as participatory budgeting, more specifically São Brás de Alportel (Southern Portugal). The interest of these cases lies in the way they provide a challenge to the prevailing discretionary mode of governance in Portuguese society, and in their exemplary status as a display of the potentialities and difficulties of generating new knowledge configurations associated with the search for more equitable public policies.

Spain displays a range of interesting experiments in urban government and knowledge-based policy-making. The case of Seville, in the region of Andalusia will be examined in detail. Seville, again, hosts a set of citizen initiatives and an experiment in participatory budgeting.

Brazil offers a significant number of participatory initiatives articulated with representative institutions, and a continuing tension between popular movements and associations and the state. It also provides interesting examples of active engagement of experts and expertise with citizens in areas directly relevant to the issue of inequalities. Health Management Councils (Conselhos Gestores de Saúde) and the articulation of urban planning with participatory budgeting provide two privileged entry points into these initiatives. These will be focused on the case of Belo Horizonte, located in the State of Minas Gerais.

The second set of cases focus on public health.

We will examine initiatives in health promotion and environmental justice based at FIOCRUZ[14], in Rio de Janeiro, and of the Brazilian Environmental Justice Network,

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[14] The Oswaldo Cruz Foundation (FIOCRUZ)/National School of Public Health has a crucial role in promoting and gathering some of the most innovative projects in the fields of public health and environmental health, as well as collaborating in initiatives in the field of environmental justice. Additionally, several projects are developed in connection or

which provide instances of the complex co-production of the cognitive-scientific, the social and the political in the context of Latin America, and on episodes of controversy related to environmental health issues in Portugal.

These cases will allow contrasting approaches to the conditions and processes of co-producing knowledge and social order in the field of public health.

The two sets of case studies are a privileged entry point to the analysis of accountability systems through the identification and characterization of experimental initiatives in capacity building and priority setting aimed at remediating inequalities. A range of key questions will provide the basis for cross-case comparisons:

- How do these initiatives contribute to the production and mobilization of knowledge(s)?
- Is there a division between expert knowledge and lay knowledge?
- Are the types of knowledge mobilized in these processes shared by all the actors involved?
- How inequality problems/issues are dealt with?
- What are the main areas of intervention in each process? How are these areas discussed?
- How are priorities defined?
- How do citizens participate in the processes?
- How are redistributive effects perceived and how are they translated into the processes?
- How are these initiatives designed?
- How do they promote a balance between knowledge(s) and rights?
- How is a "problem" defined? How do these processes establish a balance between problems defined in a top-down way and those defined in a bottom-up way?
- How is the dimension of social justice incorporated into these processes?
- How are the outcomes translated into public policies?
- How to define and assess capacity-building in each of the processes?

Public policies, accountability and configurations of knowledge

Introduction

As stated above, the first set of cases includes a range of situations and processes across three countries — Brazil, Portugal and Spain — and two continents — Europe and Latin America. These cases concentrate the main debates identified in the previous sections and allow for a detailed study of the ways in which accountability

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cooperation with poor communities in Rio de Janeiro area.

procedures are organized and enacted in relation to public policies. The analysis of knowledge configurations assumes here a central role.

Both participatory budgeting processes and health municipal councils have their origins in Brazil. Later, different models of participatory budgeting were developed in different parts of the world, namely in some European countries (Portugal, UK, France, Italy, Germany, Spain, among others).

The conditions for the emergence of these types of participatory procedures are linked to the democratization process that took place in Brazil during the late 1980s, with roots in the 1970s. In fact, during this period, there was ground for the emergence of experiences of construction of public spheres and for the extension and democratization of State management. Some perspectives characterize this period as the one of the effective foundation of civil society in Brazil (Dagnino, 2002). The discussion and elaboration of the democratic Constitution (1988) is, by itself, a good example of a participatory process, since citizens were able to propose amendments to be included in the text. As a result, participation was inscribed as a fundamental right of citizens and participatory spaces were considered as a part of the architecture of the State.

In the wake of this process, innovative procedures and experiments were launched in several municipal areas, involving citizens in decision-making processes related to a range of domains of public policy. The emergence of participatory budgeting and health municipal councils are part of this process.

The neoliberal policies of the 1980/1990s had as a major consequence the deepening of social and economic inequalities, but, this did not affect the visibility of Brazilian civil society.

Democratization was, thus, associated with the construction of a sphere characterized by democratic social practices, the revaluation of an ambiguous cultural tradition concerning democracy, and, finally, the defence of the demarcation between civil society and State (Avritzer, 2002).

The participatory budgeting processes

The first experience of participatory budgeting emerged in Porto Alegre (Rio Grande do Sul, in Southern Brazil), in 1989. The transformations in the main urban areas of the country — a huge increase of the population living in the cities, the removal of low income populations to the margins of the cities and a vast increase in the number of civic associations — were key elements in this process (Avritzer, 2002; Dagnino, 2002). The process of participatory budgeting was the outcome of the demands by popular movements, namely by neighbourhood associations, and the fulfilment of the program of the Workers Party, in the power from 1989 to 2004.

Participatory budgeting in Belo Horizonte, Brazil

The experience of participatory budgeting in Belo Horizonte was launched in 1993.[15] In 2006, a complementary process was created: the digital participatory budget, running in parallel with the original procedure.

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[15] In 2004, Belo Horizonte was awarded, by the United Nations, the "Public Services Prize" for its role in contributing to the improvement of public services.

Participatory budgeting in Belo Horizonte is steered by the Municipal Secretary of Planning, every two years, a slice of the municipal funds for investment is allocated to participatory budgeting. Decisions taken under this process have to be submitted to the discussion and deliberation of citizens and civic and social organizations.

The municipality of Belo Horizonte is divided into 9 administrative regions[16], each of them organizing public regional assemblies to discuss the budget proposals.

This procedure is organized in three phases: firstly, the Secretary of Planning presents in each regional area the results of the previous round of the process (namely, the number of approved proposals and the phase of enactment of each approved proposal); secondly, the Municipality publicizes the available resources for participatory budgeting and the proposals for discussion and voting are presented; thirdly, the regional assemblies are held.[17]

The distribution of available resources belongs to the second phase. Half of the amount is equally distributed among the 9 regions. The other half is distributed according the "Quality of Urban Life Index"[18]. This Index tries to balance the number of inhabitants in each region with the level of income *per capita* in such a way that the higher the Index rate, the lower the amount of resources to be made available. The creation of the index was intended to improve the redistributive capacity of procedures such as participatory budgeting.

In the third phase — regional assemblies — the proposals presented in the previous phase are subject to discussion. During the assemblies delegates who will participate in the voting process are elected.[19] After the first round of regional assemblies, nine "Priority Caravans", one for each region, are constituted — composed of elected delegates. These caravans will visit all the sites related to proposals voted as priorities. After this process, the proposals are finally voted at the "Regional Priorities Forum". In the last round of regional assemblies the delegates are elected, who will constitute the "Overseeing Committee of the Approved Proposals" (COMFORÇA). The role of this committee is to oversee the enactment of each approved intervention, to accompany the process of public contest for each approved intervention, and to discuss the technical problems that may emerge during the enactment of each approved proposal.[20]

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[16] These regions are: Venda Nova, Norte, Nordeste, Leste, Centro-Sul, Oeste, Barreiro, Noroeste and Pampulha.

[17] A detailed description of the different phases of the process can be found at http://portal2.pbh.gov.br/pbh/index.html?id_conteudo=12266&id_nivel1=-1. Every two years, the municipality publishes the methodology of participation and the guide for the next two years (Prefeitura de Belo Horizonte, 2006a and 2006b) which are distributed to the whole population.

[18] The calculation of the index is based on the following formula: $E*1/y$ (E = number of inhabitants in the region; E = 2.7182818; y = average income of the region). Fifty four indicators are considered for the calculation of the index, which are then organized in ten groups of goods and services linked to quality of life: supplies, culture, education, sports, housing, urban infrastructures, environment, health, urban services and urban safety.

[19] One delegate is automatically elected by each region and each communitary association has the right to propose one delegate. The other delegates are elected according to the following method: assemblies with 1 to 200 participants elect 1 delegate for every 10 participants; assemblies with 201 to 400 participants elect 1 delegate for every 15 participants; assemblies with over 401 participants elect 1 delegate for every 20 participants.

[20] This committee meets every month with the Municipality.

In 2006, the municipality of Belo Horizonte started the implementation of a complementary process of participatory budgeting: digital participatory budgeting. This is the first experience of the kind in the world. In the document prepared by the municipality to promote this new procedure it is stated that, considering the success of participatory budgeting as an instrument of integration of popular participation in urban planning, the time had come to broaden the process through the inclusion of actors who do not participate in the "traditional" way (Prefeitura de Belo Horizonte, 2006b).

The method chosen for the digital process differs significantly from the traditional one in several ways:

1. people do not participate in assemblies and do not elect delegates;

2. the proposals are selected through an online voting process;

3. each citizen is able to vote for proposals in the 9 regions (in the "traditional" procedure, the discussion and voting process is territorialized, which means that a citizen is allowed only to participate in the selection and voting of proposals in his/her region of residence);

4. the proposals subject to voting are chosen by the Municipality and the COMFORÇA (in the "traditional" process, citizens choose the proposals that will be voted in each region);

5. each person can vote only once, since there's only one electoral round.

To implement this procedure, the municipality has installed ca. 180 voting points in the city and provided training courses to those who would attend to those points, helping people to vote. These voting points were strategically situated in the areas with lower income population (namely in the slum quarters). Everyone with access to a computer could vote from home. Information on the location of the voting points was distributed through mail to the entire population.

Participatory budgeting in S. Brás de Alportel, Portugal

Differently from the case of Belo Horizonte, participatory budgeting in S. Brás de Alportel is a consultative process. Decisions taken under this process have the status of recommendations to the municipal government, with no binding power.

One of the interesting features of this particular experience is that it was launched as a result of a EU-funded project, under the EQUAL programme, named "S. Brás Solidário". The project partners include Portuguese and European teams. From the Portuguese side, the participants are a local development association (In Loco), the Municipality of S. Brás de Alportel, an industrial association of cork oak producers, a fire brigade and the Youth National Association for Household Action. The main objectives of the project are the promotion of active citizenship and the individual and collective capacity building of the local population, through: the implementation of participatory budgeting as an instrument of participatory democracy, citizen empowerment and the strengthening of citizenship; the organization of a volunteer network to assess and deal with local needs in the social and environmental domains; the implementation of a social trade and solidaristic exchange system aimed at reducing social disparities.

Participatory budgeting in S. Brás de Alportel has a municipal scope and there is no place for the election of delegates. Participation is individual: one person, one proposal.

All the resources available for investment related to urban planning are discussed under this procedure. As a consultative experiment with no binding power, the final decisions are made by the municipal government. However, given the public political involvement of the municipal government, this pioneering experience is likely to be consolidated as a mechanism for the empowerment of local populations.

The process is organized in four main phases: 1) definition of the model and general guidelines of the procedure; definition of assessment procedures and instruments; 2) creation of instruments for the consultation; organization of the first round of public meetings; 3) Analysis and incorporation of the approved proposals; definition of proposals for investments; devolution of the final results to the population; 4) global assessment and preparation of a new participatory budgeting cycle.[21]

Participatory budgeting in Seville, Spain

The participatory budgeting process in Seville also defines as its main purpose the management of the municipal budget, conducted through the active and direct participation of citizens, and not only elected politicians. This procedure was created in 1994, after an agreement between two left wing parties.[22] After the first year of its application, the decision was made to broaden the experience, through the implementation of a specific participatory budgeting conducted by youngsters and focusing on their interests or needs.

Assuming that every citizen is acquainted with the most pervasive daily needs of their residence area, the aim of the process is to promote a broader participation in decision-making related to the investment of public resources. As a consequence, the population becomes part of the actions involved in city planning through the identification and proposal of means to address their needs.

The participatory budgeting in Seville aims at: to transforming citizens into protagonists of urban planning; finding ways to achieve the actual needs of the population; improving capacity-building for citizens; promoting public accountability and transparency of local government; and, finally, creating a space for dialogue and for decision making involving citizens, elected politicians and technicians committed to the promotion of justice and equality within the municipality.

The procedure is organized in different decision levels:

> 1) municipal districts (linked to public spaces and infrastructure in the domains of education and culture);

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[21] A more detailed description of the participatory budgeting cycle can be found at http://www.saobrassolidario.com/index.swf or at http://www.cm-sbras.pt/ portal_autarquico/sao_bras_alportel/v_pt-PT/menu_municipe/servicos_municipais/ orc_participativo.

[22] Detailed information on Participatory Budgeting in Seville can be found at: www.presupuestosparticipativosdesevilla.org

2) citizen participation (promotion of activities within the context of organized civil society);

3) Sports (sports infrastructures and sports activities);

4) urbanism (structuring urban intervention).

For participatory budgeting, the city was divided in different zones, called Civic Centres, which have emerged from the already existing 6 districts. In each zone, public assemblies are organized to promote discussions and decision-making. Everyone living in the neighbourhood is entitled to participate in public assemblies. In each zone there is also a "Motive Group" (Grupo Motor), composed of inhabitants aimed at promoting the process and the participation in public assemblies. Finally, there's a technical committee coordinating the whole process, making the connections between politicians, experts and the various "Motive Groups".

Proposals and decisions take place in public assemblies. Everyone can present a proposal and every proposal has to be voted. The proposals getting most votes are assembled and discussed in a general assembly. Both experts from the municipal government and citizen representatives decide on a weight for each proposal, in order to incorporate a social justice dimension.

The Health Municipal Council of Belo Horizonte

During the 20th century, access to health in the Brazilian context went though three different moments: a) until the 1930s, health was strictly associated to oligarchic liberalism and access was dependent of actions promoted by specific social actors; b) between the 1930s and the 1970s, the State assumed a more active role as social regulator; access to health was guaranteed only to workers integrated in the labour market; c) from the 1970s onwards, social actors organized themselves collectively claiming access to health as a right to every citizen; the catholic church, concerned with low income populations, and the movements that came to be known as "sanitarian movements", gathering health professionals and social organizations launched a struggle for health for all (Avritzer *et al*., 2005). During the latter period, debates over health opened up a field of conflict (Melucci, 1999), finally leading to the institutionalization of health as a "right of all and a duty of the State" (1988 Constitution of Brazil).

After 1985, laws on participatory practices in the health domain were issued, creating conditions for the implementation of health municipal councils. It should be added that this period was characterized by a paradigm shift: health intervention became centred in prevention, health became subject to social control, and collective social practices were established as part of the national health system (Avritzer *et al*., 2005). A national committee for the reform of the health system was created, with a balanced representation government and civil society.

The 1988 Constitution included processes for citizen participation in deliberations concerning public policies.

Law 8142/90 (1990) created health municipal councils as permanent institutions and as deliberative instances of the national health system, at all three levels of organization: tertiary, which includes specialized hospitals; secondary, which includes

district hospitals; and primary, which includes local health centres and house-based treatment (Cohn and Elias, 1999).

The Unified Health System (Sistema Único de Saúde) — which is the basis of the health public system in Brazil — is organized around the decentralization of services and participatory management, delegates to the municipalities and their local systems a crucial role in assuring the universality of access to health services.

Health municipal councils have the following characteristics:

- plurality of actors;

- commitment to the reduction of inequality in access to health public services;

- intervention for reducing inequality through participatory and deliberative arrangements.

Within this system, health is organized on a territorialized basis.

In Belo Horizonte, there have been experiences of popular participation in local health centres since 1984. At that time, local councils and committees were created in several neighbourhoods. In fact, the initiative of creating health councils emerged prior to the drafting of the 1988 Constitution. However, rules of organization and its definition of structures and competences were clarified only with the constitutional process (Avritzer *et al*., 2005).

In 1991, the Health Municipal Council, the District Councils (one for each health district), and Local Health Commissions were finally established in Belo Horizonte.

The main competences of the Health Municipal Council were defined as:

- defining strategies and controlling the enactment of municipal health policies;

- defining guidelines for the elaboration of health plans (taking into account the epidemiological characteristics of the population and the health services model of organization);

- approving criteria and amounts of salaries for different health services;

- proposing criteria for the definition of standards for health care;

- monitoring and assessing the performance of public and private health services;

- monitoring the development process and incorporating scientific and technological innovations into the field of health;

- approving, assessing and evaluating the Municipal Health Plan;

- approving, assessing and monitoring the management of municipal health resources;

- establishing permanent channels of dialogue with civil society.

Both district councils and local commissions have their own competences and roles.

The Health Municipal Council is composed of users (18), health workers (9), service providers (4) and representatives of local government (4). The parity between users and other elements has to be guaranteed.

There is an explicit concern with giving voice to groups of users who are more affected by health risks like, among others, women, retired people and the chronically

diseased. Besides, territorial organization aims at contributing to the reduction of the unequal distribution of health services.

The organs of the Municipal Council are:

- The plenary (which is the deliberative instance);
- The directing board (composed of 2 users, 1 worker and 1 service provider);
- The executive secretary (who provides administrative support)
- The technical chambers (Human Resources, Financing, Control, Assess and Municipalization, Communication, Sanitation).

To sum up, Health Municipal Councils appear as hybrid institutions that associate direct democracy mechanisms with those of representative democracy (van Stralen, 2005).

Public health, environmental justice and new accountability systems

Introduction

In Latin America, a specific brand of public health has emerged in the latter half of the 20th Century, which is widely known as "collective health".

Inspired by social medicine and critical approaches to epidemiology and to preventive medicine, collective health explicitly addresses the social, economic and environmental conditions of health and disease (Paim, 2006). Health promotion, understood as interventions aimed at changing these conditions through collaborative and participatory projects and initiatives, and environmental health figure prominently in the agenda of collective health (Czeresnia and Freitas, 2004).

Through the mobilization — going back to the 1960s and 1970s — of health professionals, social movements, sectors of the Catholic Church and — from the 1980s onwards — of public institutions as well, a movement for health (Movimento Sanitarista) took shape in Brazil, which played a crucial role in inscribing the right to health and health care as a fundamental right in the 1988 Constitution, opening the way to similar processes in other Latin American countries. The 8th National Conference on Health, organized by that movement in 1986, drafted a set of proposals on the definition of the right to health and health care which were included, to a significant extent, in the 1988 Constitution.

The Constitution defined health as a "right of all and a duty of the State", and several laws passed by Congress in the 1990s provided the institutional and legal basis for the creation of a national, unified health service which embodied the principles underlying the conception of health as collective health.

Health promotion, thus, became central to the whole design and implementation of policies in the field of health (Gerschman, 2004). In a society displaying huge inequalities as is Brazilian society, however, the implementation of a comprehensive health policy aimed at ensuring health care for all citizens proved to be a huge task, its successes being unevenly distributed across the national territory. The decentralized and place-based design of the health system — which rests largely upon the provision of care and the promotion of health at the municipal level — made it easier to identify regional and group-based inequalities in health conditions and in access to health care. These inequalities are class-based, disproportionately affecting low-income or poor populations; they are associated with exclusion — of the homeless, especially of children —, and with ethnicity and race, especially in the case of indigenous populations. There is a strong association between inequalities in health and access to health care and situations of environmental racism or, more generally, of what has come to be named environmental justice. These situations generate specific forms of vulnerability which are not adequately addressed through "downstream" provision of health care or through more traditional approaches to preventive medicine. As a response to these situations, a range of initiatives were launched, some of them originating in health professionals and health institutions, others in popular mobilizations and movements or in a convergence of both. These initiatives provide exemplary instances of the complex co-production of the cognitive-scientific, the

social and the political explicitly addressing issues of inequality as these are revealed by the violation of the right to living in a healthy environment.

We have selected as case studies two of these initiatives. The first includes the programs for fighting and preventing endemic, vector-transmitted diseases and the second initiatives promoted by the national environmental justice network. Both case studies are still at a very early stage, and so only a summary description of their contents and design will be offered here.

Programs for fighting and controlling endemic diseases

Diseases transmitted by vectors such as mosquitoes, as is the case of Chagas disease, malaria or dengue are endemic to some areas of the world, namely Latin America.

In Brazil, efforts to eradicate these diseases stumbled on the resilience of the vectors and lead, in the 1990s, to the widespread adoption of new strategies for the control of these endemic problems. These new strategies were based, first, on a move from trying to eradicate pathogens or vectors (namely though chemical means, which had significant negative side-effects and were generally of limited effectiveness) to the design of place-based, collaborative and participatory approaches to the control of the vector, namely through interventions in the environment, so as to remove conditions favourable to the creation of niches for mosquitoes to live and reproduce.

Programs of this type involve the articulation of a range of different disciplines and forms of knowledge, including, for instance, the collaboration between public health specialists and entomologists, but also local communities and their knowledge of local ecologies, construction materials and social organization. At the same time, the effectiveness of these approaches requires the monitoring and evaluation of its successes and failures, which, in turn, lead to the design of participatory forms of accountability by those involved in the programs, and based on criteria to assess collective health, including ecosystem criteria and criteria based on social determinants of health.

This case study will explore the cases of campaigns addressing the dengue fever in Rio de Janeiro (Southeast Brazil) and Recife (Northeast Brazil), two areas exemplary of the strong regional inequalities, which are a feature of Brazil, but also displaying great inequalities in vulnerability to endemic health problems (Augusto *et al.*, 2005).

Environmental justice and public health

The Brazilian national environmental justice network was created in 2001 through the convergence of social movements, NGOs, trade unions and researchers. Its main field of action is centred in the articulation of environmental struggles and/as for social justice. Health issues, as privileged entry points into the identification of specific forms of vulnerability, figure prominently in the movement's initiatives and campaigns.

The specific action that will be examined in detail here is the campaign launched by the movement, in July 2006, against the plans to allow the import of used tyres from the European Union to Brazil. Brazil is a large market for "reformed" tyres, and business interests have pressured both Government and Congress to pass a law

allowing those imports. Faced with opposition to the passing of the law by Congress, the EU threatened to sue Brazil at the WTO for violation of free-trade agreements.

Opposition was spearheaded by environmental organizations and by the environmental justice network invoking the right of Brazil to refuse becoming a dumping site for waste form Europe or elsewhere, as well as the public health problems arising from the accumulation of used tyres in dumping sites, which would create a favourable environment to the creation of niches for the reproduction of disease vectors, such as the mosquito Aedes Aegyptae, associated with dengue fever.

This process, still underway, is an exemplary instance of a struggle for addressing issues of inequality between countries and regions (North-South) and their implications for within-country inequalities. It provides a privileged observatory of how a repertoire of citizen initiatives and collective action is mobilized to create alliances and coalitions with public institutions (such as the public prosecutor's offices at both the State and Federal levels, acting as promoters of "diffuse rights", such as those related to the environment and health, but also Congress, the Government and political parties), as well as networks of international solidarity.

A central concern of the ongoing campaign is the struggle to make the Government and Congress accountable to citizens as far as decisions likely to have negative effects on environment and health are concerned.

A further issue is how to create accountability systems which address inequalities between North and South justified by the respect for free trade, where Northern countries impose on the South the acceptance of measures they would not allow in their own territories. The mobilization of citizen movements both nationally and transnationally appears, in this case, as a condition for successful coalitions in order to promote accountability as social control of public policies by citizens.

Methodology and research design

The methodological approaches to the case studies were designed to strike a balance between the specificity of each case study and their integration through comparison. A range of cross-cutting questions were formulated as a set of guidelines for fieldwork, but each case study is allowed to develop according to specific features related both to the setting and to the dynamics of inquiry. A version of the extended cases study approach (Burawoy, 1991 and 2000) was thus developed, with some modifications, to allow for the detailed investigation of what we have called the "grammars" of inequality and accountability in each setting. The approach can be described in general terms as ethnographic, based on detailed and "thick" descriptions of the cases. Several techniques and methodologies are combined in this approach, including fieldwork — based on trips to field-sites, engagement with actors and observation —, interviews and documentary analysis. For each case, a detailed study of the historical background based on a literature review and on available materials, such as reports, was carried out.

When possible, fieldwork was organized so as to allow the participation of members of the team in key moments of the processes under study. When this proved unfeasible, semi-structured interviews with key-actors were/will be used as the central procedure in empirical research.

For the first set of cases — on the ways in which accountability procedures are organized and enacted in relation to public policies with constitutive attachments to specific configurations of knowledge — fieldwork trips and interviews are being carried out for each case. Team members participated (or will participate) in public sessions and meetings which are an integral part of the different processes. Four cases were selected: three experiences of participatory budgeting — São Brás de Alportel, in Portugal; Seville, in Spain and Belo Horizonte, in Brazil —, and one related to Health Management Councils, also in Belo Horizonte, Brazil. The two cases located in Belo Horizonte are now completed. The remaining two cases on participatory budgeting in Portugal and Spain are currently underway.

A comprehensive literature review on the subject is now complete, focusing on topics such as the history of the participatory budgeting process; information on context; main objectives of the procedures; participants and their functions; the dynamics of the process, etc. This has allowed the preparation and design of the data collection and fieldwork procedures on the case studies in progress. A detailed schedule for fieldwork has been defined and work is expected to be completed by the end of July, in both Portugal and Spain.

The second set of case studies, on public health, is now in progress. The first case involves a comparison of initiatives related to environmental health and environmental justice in Brazil. The second case focuses on initiatives in health promotion in Brazil, more specifically on campaigns for the control of vector diseases in the urban areas of Rio de Janeiro and Recife. The initiatives dealt with in these case studies engage with the effects of different forms of inequality on the generation of vulnerabilities in specific populations and on the attempts to deal with these through collective action and collaborative interventions in public health. The case studies are expected to be completed by the end of 2007. A part of the fieldwork in Brazil is completed and a second part is expected to be finalized by July 2007.

We expect to produce a report on each case study and a final framework on approaches to accountability across the case studies. Both sets of case studies will be drawn together in a common frame which addresses the structuring questions both of this WP and of the project as a whole. Other products — such as journal articles, paper presentations, etc. — are expected to be produced as well. A joint report with the Oxford team will be delivered to the European Commission.

SUMMARY

Addressing inequality through accountability systems linked to innovative experiments

A summary of the themes dealt with in this part of this Workpackage would single out several questions deserving further scrutiny and reflection.

The first is related to what we have called the different grammars of equality, inequality and accountability and their links to different political and how they are enacted in specific situations.

Work on Brazil, Spain and Portugal and, more generally, on comparisons of Europe and Latin America has revealed two main grammars, associated with different political projects and to different ways of relating knowledge and addressing inequality: the hegemonic liberal-democratic project (grammar of accountability, contingently associated with citizen participation or empowerment) and the democratic-participatory project (grammar of social control, constitutively linked to participation, empowerment, capacity-building).

The coexistence of elements of these two main grammars/projects often within the same country and cutting across State institutions is a common finding of empirical research. This raises a second set of questions on the relationships between these projects and the specific configurations of policy interventions they give rise to and the emergence of new forms of collaborative knowledge-production, of citizen empowerment and capacity-building, and of effective redistributive effects.

The experiments explored in the cases studies provide insights into the conditions under which these aims can be achieved and how they are assessed in relation to specific criteria associated with different grammars of inequality/equality and accountability.

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OTHER RESOURCES

1. Case studies on public policies, accountability and configurations of knowledge

Belo Horizonte, Brazil

Participatory Budgeting
www.pbh.gov.br

Digital Participatory Budgeting
www.opdigital.pbh.gov.br

Health Municipal Council,
www.pbh.gov.br/smsa/montapagina.php?pagina=conselho/index.html#documentos
(reports)
www.pbh.gov.br/smsa/montapagina.php?pagina=conselho/resolucoes/index.html
(regulation)

Seville, Spain

Municipal Participatory Budgeting
www.presupuestosparticipativosdesevilla.org

Youngsters Municipal Participatory Budgeting
http://www.grupo.us.es/laboraforo/

São Brás de Alportel, Portugal

Participatory Budgeting
www.cm-sbras.pt, www.saobrassolidario.com/index.swf

Development partnership
www.saobrassolidario.com

Equal (European Initiative), Development Partnerships Reports
https://equal.cec.eu.int/equal/jsp/dpComplete.jsp?national=2004-
070&lang=et&cip=PT

2. Case studies on public health, environmental justice and new accountability systems

Brazilian Network of Environmental Justice
www.justicaambiental.org.br
www.justicaambiental.org.br/_justicaambiental/pagina.php?id=822

FASE
www.fase.org.br/_fase/

Greenpeace tyres campaign
www.greenpeace.org.br/toxicos/?conteudo_id=2827&sub_campanha=0

Endemic diseases
www.fiocruz.br/cgi/cgilua.exe/sys/start.htm?tpl=home
www.ipec.fiocruz.br/pepes/dc/dc.html
www.ivdrj.ufrj.br/vetores.htm

3. Other background information

Porto Alegre Participatory Budgeting, Brazil, www.portoalegre.rs.gov.br,
http://www.planum.net/topics/community-practices-pa-links.htm

Palmela Participatory Budgeting, Portugal, www.cm-palmela.pt

Albacete Participatory Budgeting, Spain, www.albacete.com

Venice Participatory Budgeting, Italy, www.comune.venezia.it/incluir

Cordoba Participatory Budgeting, Spain, www.ayuncordoba.es

Bobigny Participatory Budgeting, France, www.bobigny.fr

Pieve Emanuele Participatory Budgeting, Italy, www.comuna.pievemanuele.mi.it

Pasto Participatory Budgeting, Colombia, www.pasto.gov.co

El Alto Participatory Budgeting, Bolivia, www.elalto.gov.bo

Ilo Participatory Budgeting, Peru, www.mpi.gob.pe

Cuenca Participatory Budgeting, Ecuador, www.municipalidadcuenca.gov.ec

Saldford Participatory Budgeting, UK, www.saldford.gov.uk

Saint Denis Participatory Budgeting, France, www.ville-saint-denis.fr/budget/

Santo Andre Participatory Budgeting, Brazil, www.santoandre.sp.gov.br

Caxias do Sul Participatory Budgeting, Brazil, www.caxias.rs.gov.br

St. Feliu de Llobregat Participatory Budgeting, Spain, www.santfeliu.org

Christchurch Participatory Budgeting, New Zeland, www.ccc.govt.nz

Grottammare Participatory Budgeting, Italy, www.comune.grottammare.ap.it

Rome Participatory Budgeting, Italy, www.commune.roma.it/municipioXI

Morsang Sur Onge Participatory Budgeting, France, www.ville-morsang.fr

International Centre for Urban Management (Latin American Incentive project on Participatory Budgeting processes - Reforzar), www.cigu.org

Participatory Democracy Project of Minas Gerais Federal University (DCP-UFMG), Brazil, www.democraciaparticipativa.org