The Universal Ethics of »Directly Observed Treatment, Short Course (DOTS)«

Exploring the Logics of Moral Reasoning in a Transcultural Medical Care Network for Tuberculosis Control in Hong Kong

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CONTENTS

1 INTRODUCTION

Using the case of tuberculosis control in Hong Kong as an example, this paper seeks to develop a systematic approach for understanding the conditions under which specific (bio) ethical implications of standardized global health strategies can be assessed. More specifically, the focus of attention will be on ‘standardized treatment, with supervision and patient support’ as part of the DOTS strategy (directly observed treatment, short course) to fight tuberculosis, officially launched by the World Health Organization in 1995.

Direct observation of patients while taking their drugs to ensure treatment compliance outside the clinical setting has been subjected to criticism ever since it started being conceptualized as the ‘gold standard’ (*see* Fujiwara et al. 2000: 434). At first glance, it represents a classic ethical dilemma of restricting the autonomy of an individual in order to protect the public from infections. The high complexity of ethically sound, and thus justified, decision-making in the field of global infectious disease control remains unquestioned. This especially holds true if one attempts to place the discourse in its bioethical context. The question of whether a standardized way of treating a disease, say in Norway as well as in Ethiopia, stands up to ethical analysis, inevitably invites a second question: Are there any universal ethical principles that do and should guide medical practice?

Much attention has been paid to the relationship between philosophical reflection and empiricism in this regard. However, concepts which effectively identify and integrate arguments from different disciplines, namely from philosophy and anthropology, into a comprehensive and coherent line of reasoning seem to fall short of interdisciplinary expectations. One observation that can be made is that scholars of both disciplines have made attempts to identify common coordinates, but remain reluctant to translate these findings into their cognitive map. Consequently, the academic discourse does not

transcend the rather disappointing cliché that what we need to show is respect for other cultures' (Kleinman 1995: 57).

Arthur Kleinman, who argues for an anthropologically informed bioethics, describes the source of the problem as follows: 'Intellectual perspectives that universalize ethical choice are flawed, at least for application to serious conflicts in the human experience of illness and care, because they are in a fundamental way, groundless' (Kleinman 1995: 49). Conversely, philosopher *Sirkuu Hellsten* states: 'Anthropologists can help us to see the cultural embeddedness of our ethical theory, but we still need philosophical reflection and logic to make sense out of entangled arguments and in the use of concepts, and to understand differences in our values.' (Hellsten 2009: 17, *see* also Nie 2011: 227).

Hence, approaching infectious disease management from a bio-ethical perspective does not only require a discussion of arguments related to content, it likewise involves conceptual questions: What exactly is the ethical subject to be studied? What are the different levels of ethical reflection, e.g. local, societal, and institutional, to be discussed in order to capture the dimension of 'the ethical regime' in place? Does the analysis have to differentiate public health ethics from clinical ethics?

The case of Hong Kong involves a unique combination of political, medical and historical factors of dealing with endemics in Asia. Therefore, it represents a particularly interesting subject for the analysis of how 'internal moralities of practices (such as moralities in medicine) and moralities external of a practice (such as political or philosophical reasoning) interact and influence each other' (Krones 2014: 265). Through the implementation of DOTS in Hong Kong, a transcultural medical care network has been put in place. It has at least three regional characteristics that might have (had) an impact on the specific operating logics of moral reasoning in Hong Kong: DOTS as a product of international, 'western' public health considerations; traditional Chinese medical culture and a British 'moral heritage'. The latter is of special importance, since it was in collaboration with the British Medical Research Council that fully

supervised chemotherapy was introduced at the Hong Kong government tuberculosis service and at the Tuberculosis Chemotherapy Centre, Madras in 1960s (*see* Fox et al. 1999: 237). Thus, directly observed treatment as well as DOTS are not technologies that were completely alien to Hong Kong's society, rather they are tools that were made available to other institutions like the WHO after they proved successful in trials (*see* TB & Chest Service 2007: 231); and as such they were reintegrated in the local system of health care provision. In contrast to other nations where DOTS is implemented[1], literature about tuberculosis treatment in Hong Kong seems to take a rather positive stance on directly observed treatment. The question is 'Why?'. While it may be true that 'there can be no room for cultural disagreement' about 'the trade-off between freedom of movement and the need to prevent the transmission' (Dawson/ Garrard 2006: 203)", I want to explore whether, in this case, directly observed treatment is based on a common morality.

It is necessary here to clarify exactly what is meant by 'transcultural medical care network' and 'logic of moral reasoning'. I adapt the first definition from the area of 'transcultural nursing and culturally competent care' which refers to its inherent concept of 'culturally congruent care' as follows:

> Simply, culturally congruent care means to provide care that is meaningful and fits with cultural beliefs and lifeways. From a professional perspective, it refers to the use of emic (local cultural knowledge and lifeways) in meaningful and tailored ways that fit with etic (largely professional outsiders' knowledge) to help specific cultures, whether ill, disabled, facing death, or facing other human conditions. Because culture is focused on the total or holistic lifeways of human beings, religion (spiritual), kinship, politico-legal, education, technology, language, environmental context, and worldview are all considered. (Leininger 1999: 9)

What is meant to serve as a normative target definition of the nursing approach, I conceptually will refer to in both a descriptive and interpretive way. On the one hand, Hong Kong is in many ways a good case to explore the issue of DOT(S)

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[1] For a discussion of perceived infringement of liberty rights in the US, see (Annas 1993).

in the bioethical context. Its recent medical history of tuberculosis, starting from the end of World War II, demonstrates the factual interaction of *etic* and *emic* very clearly. On the other hand, the paper addresses the question of whether the logic that led to the development and implementation of DOT is in fact 'culturally congruent'.

In line with *Annemarie Mol*, I refer to the term 'logic [of moral reasoning]' not only in the meaning of deducting arguments from a theory, the expression is also meant to encompass practices (*see* Mol 2008: 115 fn 14), i.e. I take into account not only philosophical reflection, but also concrete actions that can be observed in dealing with tuberculosis in Hong Kong. As much as this paper aims to answer the outlined questions, it is equally concerned with *how* to answer them.

The paper is divided into seven parts. Following the introduction, chapter 2 gives an overview of the history of DOTS as the leading strategy for tuberculosis control worldwide. Attention will be paid to the role of the World Health Organization as the initiator and strong advocate of DOTS to provide the relevant historical context for the analysis that sheds light on the questionable circumstances accompanying the implementation of DOTS in different countries. Chapter 3 discusses the standardization of medical treatment in relation to the universalism discourse in bioethics to argue that dealing with universalism as a discourse is important for both practical, political and theory-building reasons.

Having established the context, chapter 4 analyzes considerations of public health strategies and establishes why DOT(S) needs to be conceptualized as an ethical issue. The patient is both victim and vector of the disease. As stated above, supervised treatment might be easily conceptualized as a problem of the individual versus the public. Therefore, clinical ethics needs to address this issue. However, DOT is carried out in order to fight tuberculosis, which, being an infectious disease is a major public health concern. Whereas the former approach accords primacy to the idea of non-inference (Dawson 2011: 1), it

‘makes no sense to frame the discussions […] in terms of only liberty’ (Dawson 2011: 6) for the latter. Public health requires intervention, and, according to *Angus Dawson*, applying clinical ethics to public health issues runs the risk of ignoring that ‘we certainly have no reason to hold public health to be intrinsically unethical’ (Dawson 2011: 2). Hence, informed by this argument, the second part of chapter 4 uses an inductive meta-theoretical approach to define the extent to which public health ethics or clinical ethics is the right theoretical framework for discussing DOT. Given conceptual constraints of both frameworks for infectious diseases, I will introduce the anthropologic concept of ‘moral reasoning’. This will then lead to the re-integration of culture into the analysis. Consequently, the specific notions of bioethics in Hong Kong will be discussed and applied to the subject of DOT in chapter 5. Chapter 6 will focus on Hong Kong as a case of applied directly observed treatment. By integrating case specific historical and empirical data I analyze the linkage between the inherent ‘moral objectivism’ of DOTS and the local logic of moral reasoning. Finally, chapter 7 will critically assess and summarize the findings of the paper.

2 DOTS

Before turning to the history of DOTS, a brief characterization of this health policy is appropriate. While the catchy acronym ‘DOT’ easily unfolds to ‘directly observed treatment’, ‘short course’ needs further elaboration. ‘Short course’ refers to the shortened time that is needed for tuberculosis chemotherapy. Before the injectable drug ‘rifampicin’ replaced the oral drug regime of ‘streptomycin’, treatment needed to be given for up to one year. Through ‘rifampicin’ treatment duration can be reduced to six months (Harper 2006: 59)[2].

‘Directly observed treatment, short course’ consists of five components, two of which are of technical (1, 2) and three of managerial nature (3, 4, 5)

[2] For the technical background that describes the development of drug regimes to reduce the length of chemotherapy treatment, see (Keers 1978: 240).

(Raviglione/ Pio 2002: 778). These are: early case detection, and diagnosis through quality-assured bacteriology (1), standardized treatment with supervision, and patient support (2), secure political commitment, with adequate and sustained financing (3), effective drug supply and management (4), monitoring and evaluation of performance and impact (5) (WHO 2014). DOTS is still an integral part of the 'Stop-TB-Strategy', an 'evidence-based approach to reducing the burden of TB', launched by WHO in 2006 (Raviglione 2011: v). The so-called 'DOTS-plus'-approach aims at effectively treating multidrug resistant tuberculosis (against 'isoniazid' and 'rifampizin') with second line drugs instead of using the standard regimen (Sterling et al. 2003).

Program component 2, as pointed out earlier, is the focus of this paper. The main rationale behind directly observed treatment is to ensure treatment compliance, for treatment default is likely to prolong infectiousness, to foster drug resistance or provoke relapse of tuberculosis. Therefore, inaccurate treatment puts the individual as well as the community at risk (Volmink/ Garner 2007: 1).

2.1 A HISTORY OF CRITIQUE: 'TB IS A PROBLEM, DOTS THE SOLUTION'

The history of 'directly observed treatment, short course' is one that had been subjected to strong criticism in regard to the rapid and determined policy transfer fostered by the World Health Organization:

> What we see with the creation and subsequent transfer of the DOTS strategy is just this: The idea was taken up by those with the power to influence public opinion (TB is a problem/ DOTS is the solution) and to establish legitimacy. Once legitimacy to act was established, the idea of what to do was sold simplified, branded version to the public and the policy community. (Ogden et al. 2003: 186)

Historically, WHO's efforts to establish DOTS falls within the organization's re-establishment as a 'coordinator, strategic planner and leader of 'global health' initiatives' (*see* Brown et al. 2006: 87, *see* also Keers 1978: 248). The factual dominance of DOTS as 'gold standard' for tuberculosis control invites questions

about who defines the meaning of the disease in terms of aetiology, management capacities and responsibility. In what follows, I want to give a brief description of some main historical dates that help to understand how DOTS as authoritative knowledge is apt to shift the terrain of disease management and expertise from national to institutional (*see* Koch 2011: 90). This, in turn, shall provide an indication of potential implications for the medico-ethical dimension of tuberculosis treatment in places having implemented DOTS.

In 1993, the WHO declared tuberculosis a global emergency. This move was a reaction towards a serious rise of notification of TB cases in the previous years. The alarming spread of the disease was caused by several factors, including the increase of cases of HIV/Aids and weakened health services and socio-economics of countries (naturally) affected by the collapse of the USSR (Raviglione/ Pio 2002: 777).

Drawing on observations of the past, WHO's prioritization of tuberculosis control is characterized by the urgency of the problem and the supposed ability to solve it (*see* Raviglione/ Pio 2002: 775). The same role that the BCG vaccine and the discovery of 'streptomyzin'[3], the 'first antibiotic with proven activity against *Mycobacterium tuberculosis*' (Zumla et al. 2013: 389), played for WHO policy making in 1947, when the first WHO meeting of an expert committee on TB took place, might be ascribed to DOTS almost 50 years later. Officially launched in 1995, DOTS covered 93% of the worlds' population by 2006 (WHO 2008). Until 2012, 53 million TB patients were treated (WHO 2013: 41) in more than 127 national DOTS programs[4].

[3] For a comprehensive overview of the history of anti-tuberculosis drugs see (Zumla et al. 2013).

[4] The exact number of national TB programmes until 2012 is not available. '127' refers to data from 2009, see (Glaziou et al. 2009).

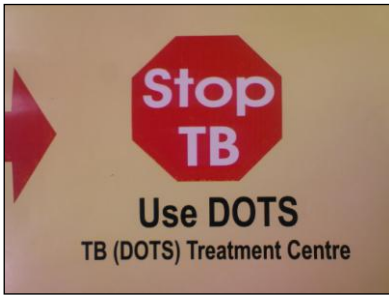

Figure 1: The Stop TB Logo. Source: (Deola Online Clinic 2014).

Part of the success in launching DOTS was its well thought-through marketing strategy. A pertinent example is 'The Stop-TB logo' found throughout the world, indicating the availability of TB treatment at a specific place. It displays the urgency of the matter ('Stop TB') as well as the recommended policy (DOTS) when turned upside down (Klaudt 2000: 859). The title of a chapter of TB guidance book 'Mobilizing Society Against Tuberculosis. *Creating* and *Sustaining Demand* for DOTS in High Burden Countries' (Klaudt 2000, emphasis added) also illustrates the determined way in which WHO arranged its activities.

WHO's conviction that supervised treatment is key to treatment adherence was already established in 1974, as this recommendation of a WHO expert committee on tuberculosis shows:

> Fully supervised intermittent chemotherapy with appropriate drugs is not only therapeutically highly effective but carries benefits in terms of toxicity and costs. Full supervision overcomes irregularity inherent in long-term self-administration of drugs. Failure of a patient to attend for a supervised dose is immediately apparent and appropriate action can be taken forthwith. (WHO 1974: 19-20)

The ultimate history of DOTS however, started at an even earlier stage. The approach was first developed and adopted in Madras, India and Hong in the 1960s. This first phase will be described in more detail in chapter 6.2. Although it is a constitutive part of the complete picture, it is somewhat detached from the developments that are part of the institutionalized DOTS advocacy.

So far this chapter has provided a general context of DOTS focused on WHO's agenda setting capabilities and capacities in the context of TB as a global health issue. Taken together, the aspects chosen within this short history of DOTS suggest that the criticism leveled at DOTS as exemplified by the quote at the beginning of this chapter, is supported by factual developments, inasmuch the very strong-willed approach taken up by WHO to implement DOTS globally

is concerned. In what follows I want to highlight two aspects that play an important role in evaluating the contested legitimacy of universal DOTS: funding and evidence. While the topic of funding is more of a political nature, discussing *evidence* will bring us closer to the core of ethical implications from a medical perspective.

2.1.1 FUNDING

One reason why DOTS has been successful on its own terms is the fact that the implementation of many programs in developing countries is tied to external funding.[5] In fact, credible evidence suggests that funding plays a significant role for the promotion of DOTS. In 1991, WHO introduced DOTS in China with a World Bank loan of US$ 50 million, yet not branded as such but already covering important components of the strategy. The realization of the China TB project[6] provided the ground for the subsequent success of the policy strategy (*see* Odgen et al. 2003: 183). Until today, China's National TB Program is dependent on external funding, amounting to 20% of its budget in 2012[7]. However, funding does not necessarily ensure implementation (*see* Odgen et al. 2003: 183) or public acceptance (*see* Pinto et al. 2010).

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[5] This also works the opposite way. In the case of Mozambique, where the existing treatment policy was in line with what only subsequently became labelled DOTS, proactive renaming made strategic sense for the Mozambican state, 'because it gave legitimacy for attracting further funds' (Cliff et al. 2004: 50).

[6] On December 12, 1991, the 'Infectious and Endemic Disease Control Project' (Health V Project) was approved by the Board of World Bank. The project was effective on April 30, 1992, and completed on June 30, 2002. The total investment was US$129.6 million. It had two sub-projects, TB Disease Control and Schistosomiasis Control. The project covered 12 provinces, mounting to 573 million people. (Xianyi et al. 2002). Neither Hong Kong, nor Macau was part of the project.

[7] The China TB project – integrated from its inception into China's overall national TB control programme –was financed through a $104 million loan from the World Bank; a $37 million grant from DFID; a $14 million grant from Japan; and $124 million in government counterpart funding. Other major international partners included the Bill and Melinda Gates Foundation, the World Health Organization, KNCV Tuberculosis Foundation (The Netherlands) and the Global Fund to Fight AIDS, Tuberculosis and Malaria (WB 2010).

In view of the pre-determined relation between technical and financial support, DOTS is an example of a created dependency between respective countries and international health agendas (*see* Harper 2007: 2241). This is not to say it is inherently wrong to set up conditions for financial support. But it partly explains criticism explicitly targeting DOTS, the strategy- with all the political context attached to it-, but not externally financed support for tuberculosis control more generally.

2.1.2 EVIDENCE

On the technical level, criticism is leveled at the deficient evidence for DOTS's success. On the one hand many long term analyses lack validity, on the other hand it is recognized that the complexity of DOTS is difficult to capture (*see* Bertel Squire/Tang 2004). Criticism that points to the unclear relevance of directly observed treatment within the whole concept of DOTS can be found throughout the commenting literature on DOTS. Pointing to the failure of research designs to measure which part of a DOT program actually contributes to better treatment compliance, *Garner* (1998) doubts that it is the observed swallowing of the drugs that makes DOT work. Even though several trials have been conducted to assess DOT as a factor that ensures treatment compliance, the main content can be summarized as follows: 'We, suggest that, in the future, WHO should be less dogmatic around a particular intervention strategy, assess the evidence more carefully and systematically before launching international programs, and define complex interventions precisely before promoting them.' (Volmink et al. 2000: 1032). The recent Cochrane-Report (Volmink/ Garner 2007), a review of randomized controlled trials conducted in low-, middle-, and high-income countries, as well as the former ones from 2002 and 2004 could not find significant benefits of DOT on cure or treatment adherence compared to programs relying on self-administered therapy. Moreover, although the scientific tuberculosis community recognizes that self-administered therapy might be an adequate means to ensure treatment

adherence for *many* patients, for many TB experts even ‘most patients’ is not an acceptable degree, since spread of the infectious disease continues (*see* Frieden/ Sbarbaro 2002: 371).

2.2 THE POLITICS OF STANDARDIZATION

Having described why the history of DOTS can be read as a critique of WHO’s approach to deal with a global health emergency, I will now move on to show how this criticism links to a critical understanding of standardization of medical treatment. To discuss universalism in the context of DOTS means to discuss the standardization of a public health policy. Evidence based medicine has got a ‘clear moral impetus’ as *Derrick Au* explains: ‘Evidence, being objective, is assumed to be universally valid. It is therefore considered unethical for patients with the same disease condition to be treated differently.’ (Au 2002: 301). Disease is categorized as ‘objective identity’ whose dimensions can be mathematically captured, and therefore respective conclusions are considered universally valid (Au 2002: 302). By promoting DOTS worldwide, the World Health Organization relies on an approach that – despite all additional policy papers and recommendations–serves as a universal framework for fighting tuberculosis. Especially Anthropologists working on DOTS have reacted critically to their field of observation.

Ian Harper, having dealt with DOTS implementation in Nepal, which started in 1996, recognized that pre-DOTS treatment of tuberculosis has been referred to as ‘chaos’ (Harper 2006: 10, drawing on Davies). Similarly, *Erin Koch* described how the implementation of DOTS after the collapse of the Soviet centralized medical infrastructure in Georgia, which went along with the establishment of international organizations, ‘contested cultural terrain of Georgian medicine as it wrestles with global requisites of standardization while reeling from cultural and national instability’ (Koch 2007: 247). *Koch* links attitudes towards allegedly positive changes in treatment to the broader perspective of politics. She argues that the implementation of DOTS in Georgia ‘is framed by assumptions that the

WHO model – and the larger paradigms of modern Western biomedicine that it presents – offer a necessary and 'rational' response to what international organizations perceive as the 'irrational' and 'chaotic' nature of the Soviet approach to control TB as it was realized in Georgia.' (Koch 2007: 248). One example she makes is the 'unfamiliar worldview' of the protocol with which patients as well as health personnel were confronted with. Whereas tuberculosis under the Soviet system was actively detected by mass screenings, DOTS uses a passive case finding approach. Because of stigma, infected persons in Georgia were reluctant to proactively visit a doctor (*see* Koch 2011: 89)[8]. 'Chaos' is a condition that not only has been used to describe health systems, but also patients. *Denielle Elliott*, who had worked on DOT programs in the context of HIV/AIDS patients among the urban poor in Vancouver, Canada, came to the following conclusion: 'While DOT programs are developed under the rhetoric of adherence, they are part of an assemblage of strategies that construct subjects as non-compliant and as diseased and that attempt to shape them as manageable citizens. The goal is to treat their infections, but also to ensure 'stability'- the antithesis of 'chaos'' (Elliott 2007: 160).

DOT has been the subject of many empirical studies that focus on the practical implications of DOT. By way of illustration, I want to give two further brief examples of how DOT has been perceived. Findings from a study of India display the patient's perspective, while the description of Mozambique shows how the government got and stayed involved in the process of implementing DOTS.

[8] At the present, *Erin Koch's* work on tuberculosis in Georgia is the most comprehensive account of anthropologic analysis on DOTS (see also Koch 2013).

India

Even though India has currently the world's largest DOTS program, aimed at providing access to over one billion people, both public awareness and public acceptance of it are low with many people seeking help in the private sector. Findings of a study among Indian tuberculosis patients seeking treatment in the private health sector suggest that the rationale behind DOT is perceived as holding patients irresponsible (Pinto/ Udwadie 2010: 4). In this study, 36 out of 200 respondents (18%) stated that they knew about the importance of treatment compliance, that they were responsible individuals and thus do not applaud supervised treatment. 90 patients (45%) gave the intrusion of their privacy as a reason for rejecting DOT (Pinto/ Udwadie 2010: 3). Whereas these findings give the impression of an informed, determined position on DOT, it has to be noted that the authors of the article observed a general mistrust towards the Indian public health system.

Mozambique

In the Mozambican case the Ministry of Health requested help from the International Union Against TB and Lung disease (IUATLD) in 1977, which resulted in the set up of the first National TB Programme. The collaboration continued and – among other reasons – it was the presence and the widely recognized expert knowledge of *Karel Styblo*, that shifted the interpretation of the policy transfer away from a questionable top-down process: '[t]he central challenge for controlling infectious disease was less about coercion or imposition in policy transfer, but more about translating policies into practice' (Cliff et al. 2004: 51). According to *Cliff et al*. the success of DOTS was due to the fact 'that Mozambicans felt part of the trans-national policy community which had been involved in the field designs and discussions' which had led to the development of DOTS (Cliff et al. 2004: 51).

The success of a (health) policy is likely to be dependent on the nature of the policy transfer, which might be ‘voluntary (policy makers learn about experiences elsewhere, and choose to adapt them to their own environments)’ or coercively (policies are imposed on government policy makers by international organizations tying loans to policy conditions)’ (Ogden et al. 2003: 179). As the examples show, the expansion of DOTS was perceived differently in different countries due to various aspects that accompanied implementation. The story of Hong Kong bears significant resemblance to that of Mozambique as will be demonstrated in chapter 6.2. However,

> Once a particular policy gains momentum, political expediency becomes the primary driving force, and in its wake the burden of proof required to challenge predefined policy rises. (Harper 2006: 65)

Health policies on communicable (and non-communicable) diseases that aim to establish an international standard reflect values supported by their creators; they carry notions of how and why, and up to which efforts a specific health problem shall be dealt with. The moral rationale is not restricted to decisions on the macro-level, as health policies have a direct impact on persons. Whereas mandatory helmets for motorcyclists might be a less obvious example, moral views materialize more substantially in the set up of directly observed treatment facilities for tuberculosis control as they establish a concrete relation between health care provider and patient, that is to say a visible, interaction between community and individual.

If standardization matters, does universalism too? The next chapter follows on from the political aspect of standardization in global health policymaking and concentrates on the importance of universalism in bioethics as a discourse. This is necessary to identify the conceptual steps that are needed to analyze the ethical aspects of directly observed treatment and their scope.

3 DOES UNIVERSALISM MATTER?

Whereas there is less clarity about the adequate philosophical framework for bioethics, criticism against the predominant account of medical ethics is raised quite explicitly. The line of the argument can be summarized as follows: 1) In bioethics, the universalism discourse stems from the alleged observation that different cultures assign different weight to the value of autonomy/ personal liberty in medical decision making. 2) Bioethics is dominated by a western conception, which is strongly connected to liberalism. 3) Hence, whenever one attempts to address health issues with 'western bioethics' that geographically occur outside the western world, and thus in regard to the history of ideas most likely as well, culture specific values are likely being ignored or violated.

There are two reasons why I consider universalism an important subject of study. The first is related to the 'applied' side of universalism, i.e. the political significance of globally focused and standardized public health policies and its legitimacy. The second argument in support of dealing with universalism is the question for the (im)possibility of global bioethics.

As I pointed out previously, standardization of health policy strategies presupposes a shared set of values different cultures can consent to. This is the practical relevance of the discourse, addressing the question whether it is possible, or, more modestly put, to what extent it is possible to implement standardized strategies without neglecting a possible clash of cultural differences. In this sense, infectious disease control is one out of many examples that needs to be paid attention to in a globalized world. While infectious diseases gain some of their relevance through their categorization as security threats, the relevance of handling non-communicable diseases appears to be rather limited to states. Contrasting infectious disease control with, for example, the distributive justice of organ transplants or medical assisted suicide, one might argue, is a misleading comparison, for the latter lack a receptive global audience. However, given both the observation of *standardization* in progress, as e.g. in the field of mental health, and

concessions to issues like male circumcision, it seems that all share the 'cultural moment'. This means, either proactively or reactively, at some point along the process of policy development and implementation, the significance of cultural difference has to be discussed and – in some cases – negotiated[9]. The factual outcome of such processes, in forms of statements, laws, observations, however, does not tell much about the normative aspect of transcultural medical decision making. Can the difference of cultural attitudes towards a medical issue be so different that a standardized global health policy cannot but fail to be morally right or acceptable?

As much as this is a quest for a normative answer, it is one of a methodological nature. What is the framework within which such a question should be analyzed? The phenomenon of the universalism discourse itself is methodologically one of interdisciplinarity. At its core, it is one of competing frameworks between philosophy and empirical sciences. It would be too ignorant to leave it that and to suggest that the respective perspectives should be kept and differences accepted. Rather I would like to advance the thesis that what is happening right now under the vague concept of bioethics, is that the respective other discipline is needed to check on the validity of its own generalizations (*see* Sherif and Sherif 1969: 5). This should not be confused with generating arguments for the sake of bioethics itself. The *development* of bioethics as a discipline aims at providing an arena where arguments of different disciplines are tried to be put forward, to be defended, but not necessarily synthesized. That being said, the universalism discourse captures this dialectical process. Referring to interdisciplinarity more generally, *Jerry A*.

[9] Take, for example, the case of male circumcision in Germany. After a heated public political debate, which reached a preliminary climax in 2012, the German parliament agreed on permitting male circumcision under certain restrictions. The discussion was triggered by a prior court ruling that had put the practice into question. The debate mainly focused on balancing freedom of religion, the welfare of the child and parental rights. The question was about nothing less than whether male circumcision is compatible with German Basic Law, which reflects fundamental principles of the German society.

Jacobs found a useful way to depict strength in the ‘in-betweenness’ of arguments by introducing the picture of a seed-bank:

> The partial shelter offered by discipline-based labor markets allows for diverse ideas to develop in the academic context like seeds to be stored for future use. Thus, the failure of diverse researches in a university to be on the same page should be recognized as strength rather than a weakness, because this system produces a larger set of ideas and possibilities that may help us to address unexpected contingencies. (Jacobs 2013: 129)

Rationalizing the unease with the conceptual vagueness of bioethics expressed through criticism against universalism is apt to foster theory building. This holds for each participating discipline as external critique and stimulation necessitates to (re)substantiate the validity of a claim, as well as for the very discipline of bioethics itself. The more bioethics will be able to ’process’ descriptive and culturally based objections, the more clarity will be gained on the factors that define the ethical issue at stake, which benefits the development of adequate tools to address them.

To sum up, while it might not be possible to solve what has been described as the problem in the introduction of this paper, namely the inconvenient weakness of interdisciplinarity to generate applicable results, revealing the discursive structure can help to systematize the arguments given in a specific context by different disciplines:

> [...] global bioethics should not exclusively be understood as the existence of globally shared sets of moral values and principles, but rather as the open and methodological process of inquiry into specific moral issues from which nobody is excluded who cares about participating. (Becker 2002: 108)

What could a methodological process of inquiry into the issue of DOTS look like? What follows is an account of possible analytical steps that could be taken in order to embrace the complexity of DOTS as a global public health strategy.

4 ANALYZING A PUBLIC HEALTH STRATEGY

A good evaluation of DOTS as a global public health strategy for infectious disease control would be most coherently achieved by referring to a specific framework that guides global bioethical decision making and to compare its requirements with the actual situation. Alas, for a long time, public health control has been left out from bioethics discourse. Consequently, thought to be mainly a matter of public health, the topic of infectious disease has been put on the bioethics agenda comparatively late. This was mainly due to the ‘tremendous belief in medicine’, i.e. in ‘(preventive) vaccines’ and ‘(curative) antibiotics’, prevailing in the 1960s and 1970s (*see* Selgelid 2010). Nevertheless Griffin *Trotter* has put forward a useful way to analytically look at health guidelines, which provides a good venture point from which to explore the appropriateness of DOTS.

According to *Trotter*, every guideline implicitly holds fact claims (F claims) as well as value claims (V claims). Within this frame, a tool in order to assess whether a guideline would be helpful is to ask about the ‘doxastic security’ of these claims, that is, to inquire ‘about the stability of the beliefs it explicitly manifests’ (Trotter 2007: 59). In the case of DOTS this would mean to draw on the results of empirical studies aimed at identifying the treatment outcome, prevention of transmission etc. to generate supporting evidence. Value claims in turn, ‘cannot be definitely mediated by scientific studies’. They rest on moral convictions and preferences ’that cannot be definitely established through reason or empirical studies’. The doxastic security of Value claims is given ‘when they reflect values that are widely shared in the target population. There are four possible types of situations that might occur, which are defined by the differing security of V and F claims.

- Type I Guides (Generally Secure): F claims secure, V claims secure
- Type II Guides (Factually Vulnerable): F claims vulnerable, V claims secure

- Type III Guides (Normatively Vulnerable): F claims secure, V claims vulnerable
- Type IV Guides (Generally Vulnerable): F claims vulnerable, V claims vulnerable

Although the clinical evidence for DOT keeps being contested in the global health network, as shown in chapter 2.1.2, official statements of Hong Kong health authorities and respective studies within the population of Hong Kong give good reason to assume that the F claims of DOT in Hong Kong are firmly grounded, or in other words 'doxastically secure'. Arguments that support this claim will only be elaborated in chapter 6. As a consequence the question arises whether DOT falls under Type I (Generally Secure) or Type IV (Normatively Vulnerable), i.e. to ask: 'Are the value claims of DOTS doxastically secure?'

4.1 CONCEPTUAL CONSTRAINTS

Let me outline the conceptual difficulties to answer this question by recalling the basic systematic of (western) moral philosophy. Moral philosophy can be divided in descriptive ethics and normative ethics. According to the *Encyclopædia Britannica*[10] (2014), descriptive ethics is the 'study of the moral beliefs and practices of different peoples and cultures in various places and times. It aims not only to elaborate such beliefs and practices but also to understand them insofar as they are causally conditioned by social, economic, and geographic circumstances.' Conversely, normative ethics, 'seeks to set norms or standards for conduct', and how to justify these moral principles. Applied ethics is 'the application of normative ethical theories to practical problems'. Bioethics then is 'a branch of applied ethics that studies the

[10] All defining quotations in this section are taken from this source.

philosophical, social, and legal issues arising in medicine and life sciences'. However, bioethics tried to distance itself from being accorded to only one normative theory (Düwell 2006: 93). This especially holds true for *Beauchamp's* and *Childress'* four principles approach, which I refer to when speaking about medical ethics throughout the paper as it appears to be the most supported account thus far.

The idea underlying the principles of *autonomy, beneficence, nonmaleficence* and *justice* is that they are prima facie and universal in nature. Obviously, these are features, which make the four-principles approach appear as being of utmost importance to cross-cultural medical decision making. However, given the lack of examples to show the opposite, one might agree with *Dawson* in assuming that autonomy unofficially is 'first among equals' (*see* Dawson 2010: 221). In an article, in which *Dawson* and *Garrard* take issue with two of *Gillion's* claims related to the universal and prima facie nature of those four principles, they come to the conclusion that, in fact, there is no middle ground between moral relativism and moral objectivism. Moral objectivism[11] (or 'moral imperialism' as negatively connoted by *Gillion*), they conclude, 'provides the only satisfactory construal of the four principles approach'. What is so important about universal principles? It is the act of moral reasoning that would be the same, no matter who undertakes it:

> The approach is universal in the sense that all can use the four principles: the morality of a situation will not track the moral views of those judging it, but rather the reverse – we should aim to align our moral views with the underlying moral nature of the situation which we are judging. On this view, there will be a correct answer in each situation. It will be the appropriate response to all of the morally relevant non-moral features of the situation before us – as long as these remain fixed. A correct response is one that picks out the relevant features and weighs them appropriately.

[11] It is worth noting that *Dawson* and *Garrard* suppose that objectivism alongside with realism and cognitivism is only committed to one way of doing ethics (see Dawson/ Garrard 2006: 202). However, for methodical reasons they accept the first as a working assumption.

> [...] [J]udgments may legitimately vary from case to case, but they are tied to the factual differences between cases, not to cultural or subjective responses to those facts. (Dawson/Garrard 2006: 203)

Health, the highest common good

Griffin Trotter puts forward another reading of moral imperialism. To him moral imperialism also implies defending a single version of the common good: 'WHO believes that *health* is the comprehensive human good and that WHO is its appointed guardian'. He concludes 'This posture is ethically problematic because it pre-empts the strife of ideas between parties that harbor diverging conceptions of the right and the good'. (Trotter 2007: 21).

Even if we were able to show that all societies descriptively agree to some universals, from an ethics' point of view, the question for an objective answer is not given. To ask about the doxastic security of DOT(S)'s value claims is to ask about whether they are universally, i.e. doxastically secure on a global scale. This requires defining certain parameters that cover descriptive as well as normative aspects of value claims. Options to approach the question will be discussed in the next chapter.

4.2 META-THEORETICAL FRAMEWORK- DEFINING DOT AS AN ETHICAL ISSUE

Having argued for the relevance of universalism in general, I now turn to the more theoretical, conceptual considerations that are necessary to situate tuberculosis control in the respective context. This step is based on the premise that statements about questions provoking comparisons need to have a clear point of reference. Taking the universalism criticism seriously, I see three options: 1) Showing that universalism does not have a western bias and applying it to DOT, 2) Hypothesizing a homogenous version of western bioethics exists, identifying a local bioethics of Hong Kong, compare to which extent they contrast and conform in regard to DOT, 3) Identifying 'another', non-western

approach of universal bioethics, analyzing how much it can explain in regard to the subject of DOT. Out of this possibility I chose the second option since universalism is the broader context of this paper, but the ethical implications of DOT in Hong Kong are the main focus of attention.

Western bioethics as such does not yet provide a comprehensive and coherent account of methodological tools for analyzing infectious diseases. There is no conceptual blueprint that could be simply applied, since as of now, there does not seem to be a consensus among scholars about the very nature of the discipline itself. At this point, it is not part of my concern to dwell on this fundamental question, here I shall restrict myself to approaches, that – within the limit of their scope – share wider acceptance. Drawing on these rather isolated perspectives will help to create a clearer picture of their explanatory power. At least two sub-areas of bioethics appear to be of special importance: clinical ethics and public health ethics.

4.2.1 ON THE RELATION BETWEEN PUBLIC HEALTH ETHICS AND CLINICAL ETHICS

As suggested in chapter 3, the discourse about universalism is mostly, if not solely, grounded in the disagreement concerning the importance of autonomy. By drawing on 'the crisis of bioethics', *Angus Dawson* (2010) sets out differences between medical ethics and public health ethics. As will be shown, this distinction has a significant consequence for assigning (ir)relevance to universalism in the context of DOTS.

Attacking the predominance of autonomy[12] and, respectively, the predominance of medical ethics in the field of bioethics, *Dawson* advances the thesis that there are situations 'where, for methodological reasons, it might not be appropriate to seek consent' (Dawson 2010: 220). This was exactly the case with public health

[12] '[T]he invocation of autonomy in particular scenarios is tellingly simplistic: appealed to in the most bizarre of circumstances as a magic talisman with the apparent property of protecting the liberty-loving public from the evils of paternalism' (Dawson 2010: 221).

ethics. If, for the sake of argument, it was true, that in traditional medical ethics, autonomy justifiably trumps other values, there is a risk ‘to hold public health to be intrinsically unethical’ if the same framework is applied (Dawson 2011: 2). In his definition, public health is characterized by ‘collective interventions that aim to promote and to protect the health of the public’ (Dawson 2011: 3). He refers to ‘public’ in two ways. First ‘the public’ is the target of the intervention. Second, ‘public’ relates to the mode of the intervention (2011: 3). In this sense, individuals are neither just independent, nor are they only a constituent part of a larger entity. What counts is ‘the reality of relevant social relationships’ (2011: 18), because addressing a single person’s health as a mere corrective will not lead to the better health of a population (2011: 4). Consequently it would be misleading, the argument goes, to think of public health ethics in terms of ‘conflicts between the individual and the public’ (2011:6), and ‘protecting the individual from the interference of state power’ (2011: 7) respectively. For *Dawson* this so-called nature of public health condition is apt to work as a filter for appropriate ethical theories in public health. He goes to great lengths to reject liberalism of any kind, be it narrow liberal views or moderated positions.

The aspects discussed in this chapter indicate that the question ‘Is a public health policy, that globally requires directly observed treatment of patients automatically prone to ethical problematization in terms of culture, because of the mere fact that it interferes with the person’s liberty?’, the answer has to be ‘No’. The promotion of DOTS and its inherent compulsory logic to restrict the autonomy of patients does not violate the precept of respecting other cultures.

To sum up, if universalism is only relevant to situations where autonomy is the predominant value at stake, then universalism is not the right term to define the problem area of public health ethics. This is because public health ethics requires a different framework. But this finding is not sufficient to exclude DOTS from the universalism discourse as there might be other ethical considerations that put DOTS into question. In the next section I will therefore examine the relation between clinical ethics and tuberculosis.

4.2.2 THE MORAL EXPERIENCE IN CLINICAL ETHICS

What is directly observed treatment from a clinical ethics point of view? What does DOTS tell us about the relation between health care provider and the specific patient? There are not many publications that directly address DOT as an ethical issue and even less discussing it with reference to culture specific approaches of bioethics. This may be due to the 'inbetweenness' of DOT: As much attention and concern is drawn to the well-being of the individual person, this attention *always* corresponds with a pragmatic approach that looks at the infected person as a vector of illness and thus a threat to the society they live in. For example, it is widely recognized that inequality and poverty are significant causes for the spread of diseases. Furthermore it can be observed that the international community is reluctant to address them (*see* Porter/ Odgen 1997: 123). 'Yet the cruel irony', *Porter and Ogden* conclude, 'is that failures of this kind can lead to increased control and coercion. Rather than confronting squarely their responsibility to recast their approaches to treatment, TB control programmes place the onus on patients to comply with increasingly rigid regimens.' (Porter/ Ogden 1997:123). What implications does the very procedure of DOT have on a micro-level?

The following description by *Tom Frieden*, Commissioner of the New York City Health Department (2003-2009), illustrates that there is a normative dimension of treatment success, which underlies the technical operation:

> Direct observation is not a mechanical procedure of dropping medicine into a patient's mouth –'supervised swallowing' – it establishes a human bond, between a patient and the health care worker or community volunteer. And thereby transmit[s] *recognition* of the value of treatment success for the patient and for the community and of the program's responsibility and community support for successful treatment of tuberculosis. (Frieden/ Driver 2003)

According this statement I suggest the value of treatment success operates in at least three directions: 1) patient → community, 2) community → patient and 3) patient → patient. The patient, as well as the community, should have an interest in the patient's adherence to treatment. The act of 'supervised'

swallowing symbolizes a conditional, coercive commitment to the well-being of the community and the individual. The patient for the sake of the well-being of the community shall recognize that he is the vector of the illness and that he therefore has to protect the community against him by complying with treatment (1). The community in turn has to recognize that it is dependent on the patient's treatment adherence and therefore has a responsibility to provide him with the means to act accordingly (2). Besides this relational aspect, there is a value in the cure from tuberculosis in itself. The underlying assumption in this citation also is that the patient recognizes the value of being treated regardless of the positive effect on the community (3)[13].

Clearly, the value of treatment success is mainly determined by the infectiousness of the disease. It stands to question whether directly observed treatment would be of less coercive logic, if tuberculosis was not contagious. Being victim and vector of tuberculosis, the patient has no other choice than recognizing the value of treatment success and therefore directly observed treatment. Referring to successful treatment adherence[14], *George Annas* states: 'This is not a case in which there is a conflict between public health and civil rights. It is simply common sense. As *Dubos and Dubos*[15] rightly observe, measures to prevent the spread of tuberculosis generally do not require legal compulsion, because they have acquired the compelling strength of common sense' (Annas 1993: 588). And indeed, compared to other areas of bioethical research, directly observed treatment does not represent a plain, easy accessible object of critical inquiry. For once, it is rather silently debated in

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[13] This could be also discussed under the subject of paternalism as the following statement indicates: 'One could argue that in most circumstances directly observed treatment actually serves the best interest of the patients who are coerced into receiving it' (Trotter 2007: 146 fn 6).

[14] It has to be noted that, in this article, *Annas* puts forward arguments against universally and legally enforced DOT, as he holds the opinion that most of the people are able to comply with treatment without DOT. He thinks that there is 'insufficient justification for requiring this annoying and inconvenient method of treatment for patients who are virtually certain to take their antituberculosis medications and thus pose no risk to the public health.' (Annas 1993: 588).

[15] Dubos, René, and Jean Dubos (1952) The White Plague: Tuberculosis, Man, and Society. Boston: Little, Brown.

public. This phenomenon might be explained by its established gold standard that appears to be immune against questions that ask whether the rationale behind DOT is based on sufficient, philosophically grounded arguments and automatically skips to *how* DOT is carried out. However, let me give you an example that illustrates how the Foucauldian critique of bio-politics might be reaffirmed.

The University of California in San Diego currently recruits patients for a study on 'wirelessly observed therapy' for tuberculosis patients. Two sensors, one that is ingested with every drug and one that is to be worn on the skin, interact so that the data is directly sent to the doctor, who will then be informed about the exact time the drug has been swallowed (Clinical Trials 2014). While this technology is meant to be more convenient for tuberculosis patients, because they do not need to meet with a health worker that observes the ingestion of the drugs, this kind of – bodily invasive – treatment surveillance demonstrates what is at stake, if the idea of DOT is developed further: 'Whose body is it anyway?'.

Moreover, given DOT's haphazard conceptual position in a web of public health, clinical ethics and international bio-security, one might wonder if it is really *possible* to make a case of it. If DOT cannot be approached in dichotomist terms like individual/ community or autonomy/ dependence, how can it be framed as an ethical issue?

Building on ideas of *Arthur Kleinman* and *Charles Taylor, Hunt* and *Carnevale* suggest a framework of bioethics research that is based on a concept of moral experience:

> Moral experience encompasses a person's sense that values that the he or she deems important are being realised or thwarted in everyday life. This includes a person's interpretations of a lived encounter, or a set of lived encounters that fall on spectrums of right-wrong, good-bad or just-unjust. (Hunt/ Carnevale 2011: 659)

Two features of this definition are of importance to make sense of defining DOT as an ethical issue 'values thwarted and realised in everyday life' and 'spectrums of right-wrong, good-bad, just-unjust'. The concept of moral

experience also includes diffuse feelings, a sense of ambivalence or uncertainty of a lived encounter (Hunt/ Carnevale 2006: 661). By broadening the area of application for bioethics research, the concept of moral experience moves beyond ‘quandary ethics’ (Hunt/ Carnevale 2006: 658), drawing on Pincoff), meaning it deals with more than specific moral dilemmas and moments of choices. As a consequence, spectrums, and not categories capture experiences to which an individual ascribes moral significance (Hunt/ Carnevale 2006: 661). Clearly, the structure of the concept focuses on the *empirical* study of individuals and their perspectives. However, I do think this approach is also useful with regard to research that tries to narrow the moral significance of a health policy further down from a more *normative* perspective. In fact, the dialectic approach of empirism and normativity, many bioethicists call for, is underlying their concept. By way of paraphrasing *Charles Taylor, Hunt* and *Carnevale* explain the analytic rationale behind ‘moral experience’:

> Hermeneutical interpretation seeks clarity by identifying the object in which clarity is thought, distinguishing this underlying clarity from its presenting expression and specifying the subject for whom the underlying clarity is meaningful. Interpretation entails a ‘hermeneutical circle’, examining ‘part-whole’ relations, seeking the sense of the whole through an examination of its parts that is continually related back to the whole.
>
> For moral matters it this involves seeking the underlying sense – that is, the agent’s moral ontological horizon of significance corresponding with the moral matter in question. (Hunt/ Carnevale 2006: 659; spacing added)

Taking this approach seriously, would mean to engage in exhaustive anthropologic field research; to observe and to inquire about the perceptions of patients and health personnel that relate to the very moment of directly observed treatment and the individual circumstance that accompany this modus operandi; to relate them to broader societal realities and so forth. Although I do think empirical, qualitative research on DOTS and on DOT more specifically in the specific context of Hong Kong would be an asset to this inquiry, I do not think it is essential. Instead of being an integral part of an activity of practising ethics, the empirical input chosen in the following chapters serves ‘as a mere

vehicle for ethical reflection' (*see* Nijsingh/ Düwell 2009: 88). Likewise, from the perspective of *Hunt* and *Carnevale*, the framework of moral experience is aimed 'to better understand how individuals live out the moral dimensions of their lives', but normatively limited, as findings will 'always' be 'fragmentary and incomplete' and will not 'necessarily provide an epistemological footing to critique or support social practices or beliefs' (Hunt/ Carnevale 2006: 661).

The added value of 'moral experience' is that it provides a philosophically grounded term, which is useful and suited to frame directly observed treatment as an ethical issue.

From the previous discussion it can be seen that even if one assumes a definable scope of Western bioethics – *moral experience* on the microlevel, *the public health condition* on the meso – level and *biosecurity* on the macrolevel – to position directly observed treatment for tuberculosis within this discourse demands creative efforts to keep a minimum of argumentative coherence. The quasi-comparative approach of this paper raises the question about whether a specific Hong Kong bioethics exists, which I will answer in this chapter.

5 HONG KONG BIOETHICS

The account of publications that specifically deal with the foundation of Hong Kong bioethics scholars is limited. Whereas, for example, *Rupin Fan's* work seems to centre on the idea to establish Hong Kong bioethics as something deeply embedded in Chinese culture[16], *Gerhold Becker* focuses on the different historical and philosophical influences that taken *together* build the basis of a determinable Hong Kong Bioethics. According to *Becker* 'a distinct cultural identity has been fashioned by the dual forces of traditional medical culture and

[16] *Jing-Bao Nie* takes issue with bioethical approaches that aim to apply traditional Confucianism as they bear '[a] number of generalized comparisons or dichotomous terms of the type 'China vs. West'. The serious problem with this widespread way of thinking is that it usually simplifies and distorts the complex reality of both Chinese and Western cultures' (Nie 2011: 209-208), see also (Becker 2002: 125).

Western economic liberalism, which has significant implications for the contemporary bioethical discourse in Hong Kong' (Becker 2003: 262). It has to be noted, however, that his approach is a rather descriptive, comparative one as he does not attempt to establish a unique version of Hong Kong bioethics on his own. In his article 'Bioethics with Chinese Characteristics: The Development of Bioethics in Hong Kong' (2003), *Becker* identifies three approaches: Confucian bioethics, Sino- Christian bioethics and a 'continuing appeal of a Universal bioethics.' The first seeks to answer ethical questions by applying Confucian concepts. Advocates of Sino- Christian bioethics aim to 'identify deficiencies in the dominant western bioethical discourse and to offer remedies through a bioethics that is deeply Chinese and Christian' (Becker 2002). Representatives of the third try to establish a universal ethics by maintaining efforts to be 'sensitive to the moral intuitions of the Chinese tradition.' (Becker 2003: 273). Whereas the third approach apparently seems to provide important input to the inquiry of the paper, it is the first approach that is not solely, but to a considerable degree, concerned with Hong Kong's health care system (*see* also Becker 2006: 271). In these writings, the health care system is discussed as 'a function of the values as well as the major political-economic assumptions of a society' (Fan 1999: 555). In fact, the family-centered approach of Confucianism is not limited to this entity: '[t]he philosophy of managing a good family and that of managing a good society are essentially the same' (Li 1994: 71).

Looking at DOT from a perspective that embraces the reflexive position of the tuberculosis patient in society, referring to the public health sector as an area of bioethical application provides a fruitful starting point from which to explore possible implications of Confucianism for this *moral experience.* Moreover, Confucianism, with its strong notion of relational autonomy, has been put forward in argumentations that try to establish a distinct identity of Hong Kong's inhabitants and which thereby also try to avert the inclusion of external moral influences.

5.1 HONG KONG HEALTH SECTOR REFORM

Referring to the Hong Kong Health Sector Reform I will illustrate how implications of foreign policy development and their relation to local societal values were discussed and how they stipulated discourse over the use of Confucianism for constituting a health care system.

In November 1997, the Health and Welfare Bureau of the Hong Kong government appointed an interdisciplinary team from Harvard University to evaluate Hong Kong's health care system. Their final evaluation report evoked strong criticism. *Julia Tao Lai Po-wah* (City University of Hong Kong), for example, argues that their suggestions neglect the ideal of care which was deeply rooted in the Confucian tradition of Hong Kong's society. From her perspective, the strong emphasis on *equity* instead of on an *ethics of care and compassion* 'has led them to put forth reform proposals which are incentivise the moral attitudes of the Hong Kong people and which, if implemented, would erode of the ethic of care of the society' (Tao 1999: 572)[17].She explains that a legal right to health care is alien to Hong Kong's society. Neither does it exist, nor is it accepted. Instead she argues 'there is a well-established and well-accepted duty of care in society' (Tao 2006: 43), which ensures that everybody has access to health care, regardless of their financial means.

5.2 CONFUCIANISM AND RELATIONAL AUTONOMY

While a variety of different conceptualizations/ interpretations of Confucianism into bioethics exist, there are some basic features of Classical Confucianism (centering on the philosophical ideas of Confucius himself (551–479 B.C.), and of Mencius (ca.371–289 B.C.) around which discussions on ethical issues

[17] Addressing the financial burden the then tax-based Health Sector produced, the commission voted for an insurance-based system, which would have changed the two-tier system to a unitary delivery model. It was feared that government funding would only support those, who are at least able to pay. .

emerged, and which give a general idea of how to situate DOT. What follows is a brief outline of Confucianism and a suppositional interpretation of its implications for DOT.

The significance that *Tao* accords to a Confucian 'ethics of care' is grounded in the embedded concept of relational autonomy, which is based on *jen.* Moral agency, as well as the self of the individual, is constituted through the performance of roles:

> It is in the midst of one's social relations that one learns to be human and realizes one's humanity. In a truly reciprocal relationship, where there is mutuality of role performance, 'self' and 'other' are both constituted as well as constitutive of each other in the relationship and in the interaction which takes place within it. On the Confucian conception, neither 'self' nor 'other' is a means to the other's end, yet at the same time, each is absolutely necessary to the other for its relation and fulfilment as truly human. […] In the Confucian ethical system, being a person is something one does, not something one is. (Tao 1996: 16-17).

The very realization of the self in the social context is referred to as *jen*. There are two readings of *jen.* On the one hand, *jen* can be interpreted as affection (*jen of affection*). *Jen,* in this sense, can be translated into benevolence, human relatedness, compassion, love, etc.- expressions, that all carry 'care' at the essence of their meaning (Li 1994: 72-73). On the other hand, *jen* is a virtue. While every person has a disposition to be *jen* (Li 1994: 73), he or she can only become morally perfect through self-cultivation (Tao1996: 20), that is 'a person of *jen*' or a '*chun-tze'.* For Confucius *jen* is almost synonymous with morality, *jen* is a virtue in itself (Li 1994: 74-75).

In *Tao's* understanding,

> [t]he heart of compassion is the seed of *jen*. It is the genesis for the cardinal virtue of *jen*. Compassion is important because it enables us to be connected with and to know about others. It signifies attentiveness to and engagement with others. It creates a rudimentary bond and makes possible a form of shared agency. The development of one's heart of compassion is the route to becoming a person of *jen.* A person of *jen* is someone who can be benevolent to people in general, regardless of their relationship to oneself. The ideal of *jen* is to love people in general. It is an ideal which every human

> should aim to achieve. Confucius says that it is his ambition to comfort the old, to be faithful to friends, and to cherish the young (*Analects* 5:26). (Tao 1999:577)

Although Confucian applies a higher, more immediate obligation to persons that are close to each other ('love by graduation'), *jen* is also imperative to the reciprocal relationship between state and society. What is valued is not one good for another, but the excellence of agents, i.e. each is expected to care (Tao 1999: 581-582). Therefore, in contrast to the liberal thought, reciprocity is not understood in the way that persons engage in a *contractual* relationship with each other. It is grounded in the interrelatedness and interconnectedness of persons.

The relationships to persons outside the family are explained by broadening the concept of extended family. The rationale for caring for others is not rooted in a necessity to overcome injustice, but is based on the duty of benevolence. The Confucian philosopher *Mencius* claimed: 'Treat your elders as elders, and extend it to the elders of others; treat your young ones as young ones, and extend it to the young ones of others.' (Mencius, 1A:7:12, quoted by Zhang 2010: 263).

5.3 CONFUCIANISM AND DOT

If Confucianism reflects a genuine approach of Hong Kong bioethics, how can it or, more specifically, the concept of relational autonomy be applied to directly observed treatment?[18] *Tao* put forward an important argument that sets limits to relational aspect of autonomy. The principle of reciprocity, she argues, 'can provide for exit of relationships which are not reciprocal' (Tao 1999: 580). This was the case when one person denies its relational self-constitution. Applying this idea to infectious diseases, I argue that a person, who does not seek to

[18] As to now, there appears to be no (English written) analysis that specifically deals with Confucianism and infectious disease control. Wang lists 'not to have physical contact with other persons' when one knows about one's infectiousness with other examples that he needs to establish for an argument in support of filial duty (Wang 1999:239).

comply with the best available treatment, increases the risk to infect others and thereby ignores their relation to others. Therefore, conducting DOT, does not merely reflect an attempt to sustain an account of minimal interference, it pictures how *jen* is actively and reciprocally exchanged. On the one hand, society recognizes the vulnerability of the tuberculosis infected patient and offers help to the 'victim' to adhere to treatment, which will benefit and cure him. At the same time, on the other hand, DOT is the indispensable condition under which the patient can act according to *jen,* given that the patient is also the vector. DOT allows both society and the individual to exercise *jen* in the restrained conditions that tuberculosis has created and thereby to embrace their relatedness. In his article titled 'On the impacts of Traditional Chinese Culture on Organ Donation' (2013), *Yu Cai* (Tianjin Medical University, China) discusses reasons why a reluctance to donate organs can be observed in China. In his view, organ donation is not constrained by lack of possible theoretical underpinnings derived from Buddhism, Taoism or Confucianism. Instead, his main argument rests on the assumption that 'since the development of technology, modern Chinese have failed to develop and secure relevant ritual practices that would support their central concerns regarding the organ donation issue' (Cai 2013: 151). Drawing on *Rupin Fan*, who stressed the importance of ethical practices (rituals or *li*) alongside ethical principles and teachings, he explains:

> As Confucianism has long recognized, people's moral lives are not determined by general or abstract principles but shaped by concrete ethical practices, such as habits, etiquette and customs. It is not that they are less concerned with the metaphysical, spiritual, or essential part of their cultural beliefs, but that such cultural essence must be represented or embodied in specific ritual practices in order to exert an influence on society (Cai 2013: 155).

By transferring this idea to the context of directly observed treatment, I propose that DOT, in fact, can be interpreted as an example of a modern ritual[19] that represents the cultural belief in *jen* through the specific ritual of handing over drugs (health care personnel) and ingesting them (patient). It is an action 'that can be seen as part of meeting the requirements of morality' (Cai 2013: 155), and at the same time *a moral experience*.

Of course, this might be judged a rather euphemistic and speculative interpretation. The other extreme is to regard DOT as a coercive means that is justified, because the patient is already perceived as someone who is prone to fail accomplishing *jen*, and therefore consciously or unconsciously neglecting interrelatedness. The point is that – in the light of relational autonomy – DOT as a means of infectious disease control, shows a level of consistency with Confucianism, one of the dominating approaches in contemporary Hong Kong bioethics.

It should be noted though that this congruence of theoretic outcome should not be confused with a consistency of theoretic approaches. Confucianism as a virtue ethics is more focused on practical decision making, than on deducting guidance from abstract principles (*see* Wong 2013: 2.2). From a very critical perspective, *Ruiping Fan* argues: 'the liberal social democratic morality, as it is reflected in Beauchamp and Childress' principlism, provides a remarkably one-sided and improper account of the nature of moral thinking and moral activity, because it has mistakenly downplayed the role of ritual practices that have been exercised in any proper way of human life' (Fan 2012: 13 fn2).

So far this chapter has demonstrated that DOT may be conceptualized and justified from a Confucian perspective of bioethics. This conceptualization however is weak, given that both bioethics and infectious diseases are little established in academia in Hong Kong. Because of both ethical and epistemic

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[19] In the article *Cai* is referring to, *Fan* does not give an explicit definition 'ritual'. Given the examples *Fan* uses, he seems to apply a broad definition of the term which includes funerals (Fan 2012: 8), but also present giving on a holiday (Fan 2012: 8).

weaknesses of Confucianism, *Jiwei Ci* (1999) even argues against viewing it as the better alternative to western liberal ethics.

The next chapter describes the specific circumstances under which DOTS was developed and implemented in Hong Kong. This will involve a brief history of tuberculosis control after World War II.

6 TUBERCULOSIS IN HONG KONG

Despite all strengthened public efforts to prevent the spread of the disease that started in the aftermath of the Second World War tuberculosis–among 47 notifiable infectious diseases[20] still is the leading cause of death in Hong Kong, followed by Legionnaires' disease. In 2012, 4773 infections had been notified. 199 people died of tuberculosis, six of Legionnaires' disease. From a peak of 697 per 100,000 in 1952, the notification rate of TB decreased to 72.5 per 100,000 in 2010 (TB & Chest Service 2011: 3). Hong Kong is carrying an intermediate TB burden with a notification rate of ca. 74–90 per 100,000 population (Lui et al. 2014: e2077). Hong Kong has always had high incident rates, but the public health problem the British crown colony was facing prior and after the Second World War was clearly out of proportion. In 1938, the incident rate was 300 per 100 000 population and 1939 tuberculosis lead to death in 59% of all 7591 notified cases. The influx of migrants from mainland China in 1949 contributed to a significant rise in notification and morbidity (Census and Statistics Department HK 1980: 62).

Today, patients have access to 14 full time chest clinics and four part time clinics, located throughout the whole area of Hong Kong. While a treatment for a Hong Kong resident in a general outpatient clinic costs 45$, the treatment of tuberculosis is free of charge, - as it is for leprosy and venereal diseases (HK

[20] The Prevention and Control of Disease Ordinance (Cap.599) was set up in Hong Kong as a consequence of the SARS epidemic in 2003. However, tuberculosis was declared a notifiable disease in 1939 (Starling et al. 2006: 226).

Public Health Fact Sheet 2013: 1). Moreover, '[p]atients are free to choose and switch between clinics and receive treatment wherever they find convenient so as to effectively incorporate the administration of daily medications into daily lives.' (CHP 2007: 2). As indicated in the introduction, government's commitment to directly observed treatment is high. However, besides a reference to human rights in an official document[21], little can be reported of a discourse on ethical issues of DOT in Hong Kong. Instead statements like the following prevail:

> Probably Hong Kong's greatest contribution to medicine worldwide has been to demonstrate that fully supervised treatment of tuberculosis with highly organized follow up can cure 95% of sufferers. (Humphries 1996: 5-6)

In the following section I aim to provide evidence in support of the thesis that this observation is not due to a lack of sensibility to ethical issues in tuberculosis control, but due to the character of the public health programs that from the beginning, embraced the complexity of tuberculosis as social disease. DOTS is part of that development. Beginning with an outline of actions performed by the British colonial government, I will go on to show how the international medical setting in Hong Kong in the 1950s fostered the development of strategies and treatment regimes that focused on the epidemiologic aspect of tuberculosis as well as on the patient.

6.1 THE ROLE OF THE (BRITISH) GOVERNMENT

In contrast to China, about which *Lei* advances the thesis that its republican government was aware of the impossibility to reduce poverty on a large scale and thus strategically neglected the social nature of tuberculosis and reframed it

[21] Hong Kong's official Tuberculosis Manual reads: 'Despite a DOTS infrastructure being in place, challenges and obstacles do exist. On the part of the patient, acceptance is not an uncommon problem because of various reasons, like job factors, geographical inconvenience, physical problems, and human rights claims.' (Wong et al. 2006: 82).

as a ‘disease of the traditional Chinese family’ (Lei 2010: 261), findings from Hong Kong under British rule suggest that, even before 1900, tuberculosis was not only recognized as a social disease, but also led to correspondent action:

> […] any measures of social improvement in the colony were to an extent dependent on Europeans acting in their own self interest or from a sense of paternalism. The problem of disease worked on both of these counts. Tuberculosis, in particular, presented an individual threat to the colonizers, given the impossibility, despite a residential apartheid, of complete segregation. It sapped the productivity of workers and thus acted as a brake on economic development. On the other hand, the extent of the disease awakened the humanitarian instinct of colonizers who took their ‘civilizing’ objectives seriously. (Jones 2003: 660)

As in Mainland China, the medical authorities in Hong Kong also pointed at personal and cultural habits (Jones 2003: 666), such as spitting. However, they always emphasized the social aspect of the disease; that its most immediate effect was caused by ‘inadequate and overcrowded housing’ (Jones 2002: 673). In the late 1930’s, *Dr. Selwyn-Clarke*, a member of the British Colonial Medical Service, who was transferred to the post of Director of Medical Services in Hong Kong in 1937 (Horder 1995: 492), initiated a campaign and helped to set up the ‘Hong Kong Tuberculosis Association’ (Jones 2003: 671). In his personal campaign, that included radio-podcasts and was aimed at spreading information about how people can protect themselves from getting infected, he also cited Chinese sources (Jones 2003: 671)[22].

Treatment as opposed to prevention was rather de-prioritized. In 1936, in-patient treatment was limited to the 36 beds of the Tung Wah Hospital, because of practical and financial reasons (Jones 2003: 670).

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[22] In regard to spitting, *Margaret Jones* cautiously puts forward the thesis that he co-opted the moral prescriptions of Chiang Kai-shek, the founder of the New Life Movement (1934), in order to be able to cite Chinese sources (Jones 2003: 671, fn 63).

6.2 HISTORY OF DOTS IN HONG KONG

As pointed out in the introduction, supervised treatment as well as DOTS is not something that has been directly imposed on Hong Kong, nor was it part of a top-down approach. In fact Hong Kong, along with Madras and Mozambique, played a crucial role in the process that led to the development of DOTS as a comprehensive strategy to fight tuberculosis.

6.2.1 AMBULANT CHEMOTHERAPY

The reasons that triggered Hong Kong based enduring research into ambulatory chemotherapy were twofold. On the one hand the focus on outpatient treatment was grounded in the lack of hospital beds. At the beginning of public tuberculosis service, 1949, inpatient care was very limited in Hong Kong, even though tuberculosis took a chronic rather than an acute endemic dimension (Tubercle 1952: 64). With only 300 hospital beds made available, it was only one out of 13 eligible patients that had been admitted to hospital (Moodie 1956: 451). Secondly, efforts to improve chemotherapy regarding treatment tolerance and treatment duration were aimed at treatment compliance. Given these two different, but interrelated dimensions of supervised treatment, there is slightly differing information about who actually introduced this treatment mode to Hong Kong. *Michael Humphries* emphasized that it was *Alan Moodie*, a British TB specialist who was recruited to Hong Kong, who introduced the supervised treatment for tuberculosis, which then was established in Hong Kong in the 1950s and only 40 years later in the US (Humphries 1996: 32; 1995: 346, *see* also Starling et al. 2006: 239)[23]. *Bayer* and *Wilkinson* more explicitly point at the research of *Wallace Fox* (1995: 1546).

[23] Unfortunately it is difficult to find any further information on this. In contrast to the studies of *Fox et al*., I could not find publications that might have been useful to shed light on the specific circumstances that led to *Moodie's* ideas. For an interesting account of how a program with para-medical health personnel for tuberculosis control in Baltimore was set up, see (Moodie/ Rogers 1970).

What can be inferred from *Moodie's* publications during that period is that directly observed treatment was a consequence of ambulatory chemotherapy, which, in turn, was thought of as a solution for the gap of inpatient care facilities. In his article 'Mass Ambulatory Chemotherapy in the Treatment of Tuberculosis in a Predominantly Urban Community', *Moodie* meticulously described a large scale public tuberculosis program that had been set up in 1962. What was new was the drug regimen and the treatment modus: daily supervised treatment, six days a week for 24 weeks, followed by a period of self-administered therapy (Moodie 1967: 385). At that time the health service of the government had to handle 12, 920 patients with active tuberculosis and additional 17, 714 patients carried forward from the preceding year. Each patient was given a treatment card which carried all necessary medical information on it and which was kept by the patient (Moodie 1967: 385):

> Daily supervised treatment. The patient presented his treatment card for checking and initialling, the visit was registered, then he proceeded into the treatment room. In the treatment room, a standard pattern of administration of drugs, common to all clinics, was operated by nurses working rather on a production line bases:
>
> Two hundred milligrams of isoniazid in tablet form were given to the patient who was instructed to swallow the pills. At the next table he was supplied with a measured quantity of a freshly prepared solution containing 10 gm of sodium PAS[24]; a paper cup was supplied to each new patient who was told to bring his own cup for future treatment. Calcium PAS and benzyl PAS were available in solid form as a substitute when sodium PAS produced severe intestinal symptoms. The patient then helped himself to a small quantity of drinking water to 'wash down' the PAS. At times of water shortage, even this presented a problem. He was then handed a sweetmeat to reduce the bitterness of the PAS. (A number of flavouring agents were tried, but the sweetmeat proved to be more effective and cost less.) An injection of 0,75 gm. Solution of mixed streptomyzin and dihydrostreptomycin was given into the buttock, after which he was permitted to leave. Separation of sexes was arranged by admitting groups of each sex alternately. (Moodie 1967: 387).

[24] PAS stands for 'p-aminosalicylic acid' and is an anti-tuberculosis-antibiotic (see Fox et al. 1999: 6).

Additionally, information on the patient's treatment adherence was kept in a general codified register and checked by a tuberculosis worker, a social worker and a doctor. 'Occasional irregularity was disregarded; three successive days necessitated a home visit, and persistent irregularity necessitated an interview by the physician. Continuing noncooperation resulted in an interview by the social worker to put the patient in hospital, or if particularly intransigent, by termination of treatment.' (Moodie 1967: 389).

With the words of *Keers*: 'The driving force behind directly observed treatment was to lower the costs for treatment' and as such a project of those 'preoccupied with tuberculosis as a world problem' (Keers 1978: 235). And indeed, a programmatic statement by *Wallace Fox* supports this observation:

> If we were able, for example, to reduce the duration of treatment by half, from 6 months to 3 months, noncompliance would likely diminish significantly, and in any case, some of the resources devoted to DOT could be diverted to other good uses to protect the public health. Unfortunately, no major technologic breakthroughs are on the scene, and until the time when the availability of more potent drugs or an effective vaccine, or both, will enable us to truly move TB control beyond DOT, this unique form of medical therapy will remain a keystone in our efforts to control TB in the United States and in the world.'(Wallace Fox)

6.2.2 HONG KONG – THE HUB OF INTERNATIONAL TUBERCULOSIS RESEARCH

Apart from public measurements that focused on the social determinants, Hong Kong has a long history of trials been conducted in order to advance progress regarding the medical treatment of tuberculosis. Physicians at the Hong Kong Chest Service, 'championed Directly Observed Treatment Short Course (DOTS) decades before its importance was recognised globally.' (Humphries 2006: 402). One reason why Hong Kong became a place that attracted researchers

was the high population density[25] Hong Kong's subtropical climate[26], or with the enthusiasm of a researcher: 'Hong Kong offers unique access to large numbers of patients', who are affected by 'hepatitis A, B, and C, tuberculosis, malignant diseases such as nasopharyngeal and primary liver cancer resulting from Epstein-Barr virus infections, and hepatitis, respectively' (Norrby 1995: 90). Besides access to a large sample size, an argument based on characteristics of Hong Kong's population is made. *Lam Wah Kit*, a retired medical professor (2009) from the University of Hong Kong, reports: 'When I was a medical student[27], a number of new strategies for TB — trials mainly in collaboration with the MRC Medical Research Council, UK), studies of different regimens were being conducted...Hong Kong was a meeting of east and west. Our 'west' provided the technology and science; our 'east' meant a compliant population more agreeable to studies.' (Cheng 2009: 240, citing Kit).

The Ruttonjee Sanatorium

Significant tuberculosis research in Hong Kong took place in the Ruttonjee Sanatorium. Jehangir Hormosjee Ruttonjee, the son of a successful salesman from Bombay who settled in Kong Kong in 1884, had to face the loss of his oldest daughter who died from tuberculosis at the age of 37 in 1943. Driven by the urge to better treatment possibilities and the felt sense of responsibility, he initiated the founding of the 'Hong Kong Anti-Tuberculosis Association', now known as 'Hong Kong Tuberculosis, Chest and Heart Disease Association'. The association was set up in 1948 and Ruttonjee donated about HK$ 2,000,000 to it and to the Sanatorium which had been named after him (Starling et al. 2006: 229, 231). In the absence of qualified medical staff and equipment right after

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[25] [YEAR: POPULATION]: 1960: 3.0751; 1970: 3.959; 1990: 5.7045; 2010: 7 000 000; 2013: 7 219 700 (Trading Economics 2014).

[26] Factors that benefit transmission of tuberculosis also include 'poor air quality, ageing populations, and close contact with neighbouring areas with high TB incidence' (Kam/ Yip 2001: 822).

[27] Professor *Lam Wah Kit* was born in 1947 in Hong Kong (MacKay 2012: 18).

World War II, *Ruttonjee* looked for help from outside the colony and finally came to an agreement with the *Columban Sisters*, and order from Ireland (Humphries 1996: 23-24). Even though now run by a Catholic ministry, it was understood by the congregation responsible for staffing Ruttonjee Sanatorium that it would rather 'function as an interfaith non-sectarian hospital whose main aim would be the curing and the care and management of the tuberculosis poor, the majority of whom were refugees' (O' Mahony 2005: 19-21). This view was also held by *Ruttonjee* himself:

> We who live in Hong Kong and prosper from the patronage of this community owe it to our own fellow human beings to return to the common welfare an adequate part of whatever surplus we may accumulate...We can, none of us, be unmindful of our obligation to our less fortunate fellow man and women. Whatever our race, whatever our religious belief, our common humanity demands our help for the needy and suffering around us. (cited in Holdsworth/Munn 2012: 378)

Indeed, the Ruttonjee Sanatorium became the operating heart of the transcultural medical care network, having brought together tuberculosis specialists from the British Medical Research Council, trained medical staff from Ireland, the local Anti-TB-Association and the Government Chest Service. Numerous other co-operations evolved from this collaboration, including the World Health Organization and the training of local medical students. Moreover, 'Professor Wallace Fox of the British Medical Research Council found the discipline and enthusiasm of the staff in Ruttonjee ideal for carrying out the research which was to be instrumental in reducing the incidence of tuberculosis in Hong Kong.' (O' Mahony 2005: 42). In 1975, it was also him, together with Professor *J.G Brompton* Hospital in London, who advised to size down in-patient treatment for tuberculosis patients and to build a new, more general hospital instead (O' Mahony 2005: 42-43).

6.3 TRADITIONAL CHINESE MEDICINE (TCM)

The general colonial policy of minimal interference with local customs also applied to the professional stratification in the health sector. The British government 'has been tolerant, although not supportive of Chinese medical practice' (Lee 1975: 59). Interestingly, the first official institution for Traditional Chinese Medicine (TCM), the Tung Wah Hospital, created in 1869, was transformed into a primarily Western Medicine based clinic during the plague epidemic in 1894, following public health reforms and antisepsis development in England (Wong/ Woo 2010: 689). TCM practitioners were excluded from possessing antibiotics and the use of modern medical technology (Wong/ Woo 2010: 689). This is important to note since, albeit being somewhat different from developments in mainland China, Chinese Medicine in Hong Kong is currently experiencing a revival that it is also supported by the government (Wong/ Woo 2010: 699).

Excluding a clash of epistemic assumptions is important for the analysis, as a competition of modern/western medicine and TCM in the case of tuberculosis would have implications for the bio-chemical explanation for successful treatment. If TCM prevailed in tuberculosis treatment, it would emphasize the influence of 'the cosmological concept of Ying-Yang and Five elements'.[28]

The juxtaposition of Traditional Chinese Medicine and 'Western biomedicine' potentially displays a significant contrast in diagnosis and treatment for infectious diseases. In this sense, the 'persistence of older concepts' of Chinese medical conceptions display 'a form of resistance to the teleological assumptions of the inevitability of their modern replacements.' (Hanson 2010: 250). A recent study, however, suggests that providers of TCM 'generally do not question the effectiveness of Western medicine' (Li et al. 2013: 9) in treating tuberculosis and describe the different methods to be complementary rather than mutually exclusive. Literature does not indicate a contestation of

[28] For a description of tuberculosis in TCM see (Ho 2006).

knowledge in regard to tuberculosis. In a survey conducted in Hong Kong's Kwun Tong district in 1971-1972, 91.2% of the interviewees stated that they judge modern treatment for tuberculosis more effective than Chinese medical treatment, 1.4% stated the reverse and 7.4% were indifferent on the issue (Lee 1975: 59)[29]. From the medical perspective, studies suggest that TCM can be supportive in curing tuberculosis. For example, in combination with chemotherapy the use of 'Cordyceps sinensis can increase the patients' tolerance to chemotherapeutic drugs as well as the immunity, relieve their symptoms including night sweating and fatigue, inhibit the toxic side effects of chemotherapeutic drugs, and, in particular, prevent liver damage.' (Zhang/Guo 2012: 621). While chemotherapy is said to the attack the patient's disease, TCM helps to cure the 'diseased patient' (Yang 2005: 440).

6.4 LIMITATIONS OF DOT

Despite the accomplishments of international efforts to reduce the TB burden in Hong Kong and despite the possibility to underpin the procedure of DOT with an approach of Confucian bioethics, it has to be noted that Hong Kong also faces cases of non-adherence and stigmatization. To illustrate this limitation: One study disclosed that out of 5757 patients who registered for tuberculosis treatment in 1996 8% did not adhere to treatment, even though drugs are free of charge and the infrastructure of DOT in Hong Kong is 'very good' (Chan-Yeung et al. 2003: 266). This is a large number given that one infectious person

[29] However, it should be noted that findings might be different in other areas of Hong Kong. The research of *Li et al*. has shown that Traditional Chinese Medicine is among the range of factors which potentially influence the health seeking behaviour of TB infected persons. According to the findings of an meta analysis that focused on factors which are associated with delays in health seeking and diagnosis in China, the practice of 'seeking care first from Traditional Chinese Medicine (TMC) providers was also identified as a risk factor' (Li et al. 2012: 1, 5). Providers of Traditional Chinese Medicine who participated in the study refer patients to specialized centres and exercise a complementary treatment approach. However, the delayed referral to specialized centres, poses a risk to effective TB control (see ibid.: 2). The analysed health seeking behaviour of patients suggests, that, especially in rural areas in mainland China, there are reasons according to which TCM is, at least initially, prioritized over biomedical treatment.

is estimated to infect 12 other persons (Chan-Yeung et al. 2003: 266). Due to the availability of patient data, the study focused on medical predictors[30] and did not take into account the impact of variables such as social status. Overall, however, it suggests increasing the awareness of the importance of treatment compliance among patients and the public (Chan-Yeung et al. 2003: 266). Against this reality, the editorial of the *Hong Kong Medical Journal* claimed: 'Measures to prevent treatment defaults are urgently needed. If an infectious patient refuses treatment, the medical practitioner simply asks the patient to sign a form and no further action is taken. In New York, however, legal detention of defaulters is sometimes employed for the protection of the community. In Hong Kong, similar legislation[31] exists, but it is seldom enforced.' (Sy 2003: 77).

A telephone survey conducted in 2004 in order to compare public stigma towards HIV/ AIDS SARS and TB found that 4.9 % of participants endorsed stigmatizing perceptions against tuberculosis. This number is comparatively low given the 36.8% of interviewees who showed stigmatizing attitudes against HIV/ AIDS (Mak et al. 2006: 1917).

Moreover, the rather positive picture of tuberculosis control presented in the previous chapter must be regarded with caution since it is based on limited data. By no means do they allow generalizations on the performance and commitment of British colonial rule in Hong Kong, and more specifically on the role that it took in regard to health and health research.

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[30] According to the findings of the study, 'a history of default from treatment is the strongest predictor of non-compliance, followed by the presence of concomitant lung cancer, liver disease, and male sex.' (Chan-Yeung et al. 2003: 277).

[31] For laws related to tuberculosis in Hong Kong see Chapter 599 Prevention and Control of Disease Ordinance and Chapter 509 s15 Occupational Health and Ordinance.

7 CONCLUSION

This analysis does not prove universalism as right or wrong. What it provides is a perspective on the universalism discourse that focuses on the compatibility of Western and Hong Kong bioethics by not only taking into account respective philosophical foundations, but by also trying to integrate the history of tuberculosis control in a place where its triple roles established a transcultural medical care network. Given the high discourse complexity of each theoretical brick that builds up to the argument of this paper, it would be too ambitious to declare the Hong Kong case an explicit affirmation in defense of universalism.

For Western bioethicist, for liberalists if you will, DOT may be the least intrusive means, for defenders of Confucianism it is the minimum of (Jen) what makes people recognize they are relational beings. The practical difference may be that cultures that adopt the latter approach are more likely to mobilize resources making it easier for patients to fulfil their responsibility. With regard to universalism, it can be stated, that DOT is in line with Hong Kong bioethics as assumed in this paper. Not only on the theoretical level, but also from a political perspective it can be argued that DOT in Hong Kong is rather apt to produce positive outcomes compared to other countries[32].

The history of DOT in Hong Kong is part of the history of tuberculosis in Hong Kong, which has been shaped by a strong commitment by the (British) government. In this sense, the presumptions of relational autonomy as embedded in Hong Kong bioethics are reflected in the government's actions. By no means can it be claimed that there is a definitive causality between relational autonomy and the way in which tuberculosis is and was addressed in Hong Kong. However, by emphasising ethical, political, scientific and sociological

[32] Indeed, there exists a considerable amount of western literature that deals with concepts such as Confucianism, relational autonomy and reciprocity (see Viens et al. 2009) in order to advocate for a stronger political commitment that strengthens treatment compliance where restrictive means are applied.

considerations I have demonstrated that the logics of moral reasoning in Hong Kong's transcultural medical care network do not pose a restraint to universalism in bioethics, neither theoretically nor empirically. Whilst this may be true for the relation between Hong Kong bioethics and liberalism, it may not be so for other cultures, albeit I believe 'Cultural misunderstandings, though important, are often overemphasized as a cause for both non-compliance and unsuccessful TB programs when, in fact, pragmatic logistics such as inaccessible health care facilities or inadequate drug supplies often underlie treatment failure.' (Chemtob et al. 2009: 766).

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