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The uneven seepage of science: Diabetes and biosociality in China

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ABSTRACT

The rapid growth of the Chinese economy in the post-Mao era has been accompanied by a sharp increase in the prevalence of diabetes and recent studies suggest that there is now more than a 100 million diabetics in China. This article explores how biomedical diabetes treatment contributes to configure subjectivities and collectivities in contemporary China. Based on an ethnographic study of diabetics, it argues that biomedical knowledge of diabetes is subtly inflected as it is transmitted by doctors, pharmaceutical companies, and patients, and that these differentiated modes of transmission work against the emergence of a singular diabetic subjectivity and biosociality.

1. Introduction

Mr. Zhang was 43 years old when he discovered that he suffered from diabetes. Working as a manager in a state-owned enterprise, he was sent on a business trip to the south in 1978, but he collapsed after a two-day train ride on hard seats and personnel from the train station brought him to the railway hospital in Zhengzhou. Diabetes was not a well-known disease in China back then, and the doctors could not figure out what was wrong with him. They administered dextrose in an intravenous drip, and Mr. Zhang's condition was rapidly worsening when a specialist in internal medicine finally suggested testing his blood sugar, which proved to be 3 times higher than normal. Mr. Zhang himself had never heard of diabetes and there was no medicine for it in the hospital, so the doctors told him not to eat sugar and put him on a train back to Beijing, where he gradually learned to manage his blood sugar.

Later that same year, the process of reform and opening up started to change the lives and diets of the Chinese population. When agricultural production was decollectivized, scarcity and food rationing were forgotten and grain, oil, and meat became affordable to most people. The medical services available also became increasingly sophisticated as new technologies and pharmaceuticals were imported from abroad, but in the absence of a health insurance system for ruralites until the mid-2000s, it was mainly urbanites who could afford the rapidly rising prices for medical services. Diabetes was a rare and relatively unknown disease when Mr. Zhang was first diagnosed, but now there is likely more than a 100 million people with diabetes in China. The majority of people with diabetes have not been diagnosed, but there is a growing awareness of the disease and the proliferation of diabetes and biomedical treatment procedures have significant effects, not just in terms of medical expenses and lost life-years, but also in terms of the way people with a diagnosis of diabetes think of themselves and organize socially. Epidemiological developments have led to an increased prevalence and awareness of non-communicable diseases in post-Mao China, and while the political system has increasingly cast Chinese citizens as managers of their own lives, the emphasis on self-management is also evident in the medical system, where people are not only obliged to act as consumers of health care, but also, as the case of diabetes suggests, encouraged to think of themselves as managerial subjects with an obligation to know and control their disease.

Mr. Zhang gave me his card when I first started to take an interest in the ethnography of diabetes in 2002[1] and the card in

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[1] The Saskawa International Foundation, Novo Nordisk (China), and the Oticon foundation provided funding for fieldwork while the Danish Council for Independent Research funded the research in rural Hebei. I am grateful to Mette Thunø and Susan R. Whyte for supervising these projects. I thank all the informants from various walks of life who took the time to explain how one lives with diabetes in China. The ethnographic information presented in this article is based on fieldwork on diabetes in Beijing and Tianjin in 2002 and on a long-term fieldwork on health care in rural Hebei that included a score of interviews with diabetics in 2006. More recently, I have conducted interviews and focus groups with diabetics and doctors in Beijing as a consultant for a pharmaceutical company. The fieldwork included interviews in hospitals, clinics, and private companies with an interest in diabetes as well as participation in public lectures on diabetes. The informants for semi-structured interviews were recruited by approaching people in these locations and working through their networks. The interviews were conducted in Chinese, mainly in people's homes, hospital wards, and company offices but also in more random locations such as restaurants and public parks. In the deployment of these methods, I have tried to gain qualitative insight into multiple aspects of the way people live with diabetes by talking to people from both urban and rural China and ensuring some variation in terms of age, gender, and educational background, but I have not been concerned with statistical validity as such.

itself suggested that the growing prevalence of diabetes and the associated biomedical treatment were contributing to the emergence of particular forms of subjectivity and sociality. One side of the card stated Mr. Zhang's name and the fact that he was the daily manager of an association concerned with diabetes, while the other side offered a concise and technical description of the kind of blood a diabetic[2] should strive for. In other words, one side appeared to describe the diabetes he had, an object of control described in terms of biomedicine, and the other side described the diabetic he was, a subject in control. With a disease on one side and a personal name on the other, the name card presented-in a tangible way-the central question in this article: how do biomedical understandings of diabetes relate to identity and subjectivity in contemporary China?

It is tempting to interpret the appearance of biomedical standards of diabetes treatment on a name card as an incontrovertible indication that China is witnessing the emergence of medical identities and forms of biosociality that differ little from what one might find in the US, India, Brazil, or elsewhere on the globe and if medical knowledge were unaffected by modes of transmission, that might well have been true. However, as Hsu (1999, p. 1) points out, one may question "the idea that there are contents of knowledge that can be transmitted and learnt regardless of how the actors involved, in their relationship to each other, relate to knowledge". Arguing that it is necessary to examine not just the content of biomedical diabetes knowledge but also the way this knowledge is taught, embodied, and circulated in particular places, I first offer some basic information about diabetes in China and then move on to present ethnographic material on four different aspects of the transmission and embodiment of biomedical knowledge of diabetes in China: going to the doctor, attending lectures sponsored by private companies, talking to friends with diabetes, and working on the self to become a diabetic in control. While biomedical understandings of diabetes clearly have significant implications in China, the way this knowledge is seen to be withheld by overworked doctors, mixed with sales talk, shared with fellow patients, and transformed into embodied experiences, suggests that science seeps into social life and individual bodies in uneven ways that make it difficult to claim the emergence of any singular form of subjectivity or biosociality.

2. Diabetes in China

The first nation-wide epidemiological survey in China to provide a prevalence rate for diabetes showed a frequency of 0.67% in 1980 (Survey Team of the National Diabetes Research Group, 1981, p. 447) and diabetes was not regarded as a serious public health problem in China until the middle of the 1990s, when another national survey indicated that there was in fact cause for alarm. This survey was carried out in 1994–1995 and involved more than 200,000 subjects in 19 different locations. Using 1985 WHO diagnostic criteria, the overall frequency of diabetes was found to be 2.5% for persons aged 25–64, while the rate of IGT (Impaired Glucose Tolerance, which is often seen as a harbinger of diabetes) was 3.2%. 70% of the subjects diagnosed with diabetes were not aware that they suffered from the disease, and the authors estimated that the number of diabetics in China would grow from 15 to 20 million by 2000 and reach 63 million by 2010 (Pan et al., 1997). Shocking as they were at the time, these predictions have proven overly optimistic. A survey from 2010 based on approximately 100,000 subjects and the 2010 American Diabetes Association criteria, which lower the threshold for prediabetes significantly, found that the prevalence rate of diabetes was 11.6% and the prevalence of prediabetes was 50.1% corresponding to national totals of 114 million diabetics and 493 million people with prediabetes. Once again, the ratio of previously undiagnosed diabetes was around 70% (Xu et al., 2013). The shifting diagnostic criteria do not allow direct comparison of the numbers, but diabetes has clearly become an enormous problem in China over the past three decades.

At the level of the population, the epidemiology of diabetes in China is described and understood in terms of biomedical diagnostic criteria, but biomedicine is equally important for understanding the disease of individuals. The text on the back of Mr. Zhang's name card, for instance, lists seven different biomedical indicators including blood sugar on an empty stomach, blood sugar two hours after eating, HbA1c (glycated hemoglobin), blood pressure, triglycerids, and cholesterol, and the card suggests 'ideal' (理想) and 'acceptable' (达标) levels for each of these items. It is not clear exactly where the figures came from, but they correspond to the goals of the so-called 'intensive' management of diabetes currently recommended within biomedicine. In the course of the 1990s, two seminal research projects in the US and the UK[3] indicated that strict management of blood sugar levels significantly reduces the risk of developing complications from diabetes, and diabetics across the globe were increasingly encouraged to monitor and control their blood sugar more strictly. This 'intensive' management was facilitated by new technologies of surveillance such as personal blood sugar meters and HbAIc tests and accompanied by strict regimens of diet and exercise. Diabetics were encouraged to make themselves objects of inquiry, to write a journal to correlate blood sugar levels, diet, temperature, medication, exercise, emotional states, etc. Biomedical diabetes treatment became so comprehensive that successful diabetes management necessitated a particular configuration of the self that was geared to handling the disease. As diabetes became an object of knowledge and control, diabetics were required to become knowledgeable subjects in control. The fact that the principles of intensive diabetes management turn up on a name card in China raises many puzzling questions. How did Mr. Zhang come to think of himself in this particular way and how did his name card came to instantiate a classical dualism of biomedicine by presenting one type of body, the body we have, as the flip side of the other, the body we are (Mol and Law, 2004)? And how did the biological particularities of Mr. Zhang's diabetic body become so socially relevant that they were printed on a name card?

Such questions tap into the literature on *biosociality*, a term originally coined by Rabinow (1996) who drew inspiration from Foucault and pointed out that contemporary social life is increasingly influenced by the bio-sciences. This insight has since been developed by numerous researchers, including Rose and Novas (2005) who suggested that a new kind of citizenship – biological citizenship – is emerging. While medical personnel, authorities, and insurance companies make up biological citizens from above through operations of classification and diagnosis, these categorizations are simultaneously reworked from below by individuals, who increasingly understand themselves and form social organizations based on biomedical terms. Biosociality thus involves the acquisition of knowledge about one's own biology and

[2] No disrespect is intended in the use of the word diabetic to refer to a person. While current usage favors 'person with diabetes', this new term implicitly suggests that the person and the disease can easily be considered in isolation from each other and this does not tally with the line of argumentation pursued in this article. In China, the most commonly used terms are 糖尿病人'diabetes person', 糖尿病患者 'diabetes sufferer', and 糖尿病病人 'diabetes patient'. None of these words are considered controversial.

[3] Known as UKPDS and DCCT, cf. https://www.dtu.ox.ac.uk/UKPDS/ & http://diabetes.niddk.nih.gov/dm/pubs/control/#DCCT (accessed 15.04.14).

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