

Constructing im/migrants and ethnic minority groups as ‘carriers of disease’: Power effects of categorization practices in tuberculosis health reporting in the UK and Germany

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Abstract

Migration- and ethnicity-related categories are a core feature of public health systems internationally, particularly in health reporting on communicable infectious diseases. The specific categories and classifications used differ from country to country and are subject to controversy and change. The article compares categorization practices in health reporting in the UK and Germany with regard to tuberculosis. Tuberculosis has been framed as a ‘migrants’ disease’ in recent decades and new categories were introduced to collect and report epidemiological data. We reconstruct the genesis, change and power effects of categories related to im/migrants and ethnic minority groups. In both countries, migration-related categorizations entail constructions of im/migrants as ‘carriers of disease’. However, the categories also connect with discourses on human rights, prevention, treatment and care for migrants as vulnerable

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groups. While this ambivalent role of migration-related categories is not unique to health statistics, the potential contribution to processes of ‘othering’ and politics of exclusion seem particularly imminent in the context of communicable diseases such as tuberculosis. Ethnicity categories used in the UK, but not in Germany, also contribute to othering through racialization and culturalization, yet at the same time provide opportunities for community participation in the discourse.

Keywords

Categorization, classification, ethnicity, Germany, health, migration, tuberculosis, UK, discourse analysis

Introduction

In health reporting and epidemiology, the categorization of im/migrants and ethnic groups is both prevalent and controversial. Epidemiology is a science concerned with explaining, controlling and monitoring (*surveillance*) the spread of diseases in populations. Health reporting is an applied branch of epidemiology – carried out by public health institutions in charge of generating administrative statistics about the spread of diseases within a specified population. Communicable infectious diseases have been a central concern of epidemiology, and many public health systems today include some form of reporting on infectious diseases in im/migrant populations and ethnic groups (World Health Organization (WHO), 2010). However, the diversity of categorization practices is quite remarkable. Different classifications and categories are used across Europe, including classifications of nationality, country of birth, country of origin and ethnicity (European Centre for Disease Prevention and Control (ECDC), 2014). The existing diversity of migration-related categories (or ‘variables’ in the quantitative vocabulary of epidemiology) can be divided into two groups: ‘variables that aim to elicit the migration status of affected individuals e.g. either “country of birth,” “country of nationality” or “region of origin”’ on the one hand, and ‘variables that aim to elicit whether the infection was “imported” or to ascertain “probable country of infection”’ on the other (ECDC, 2014: 1). Furthermore, ethnicity categories are used in some places (e.g. in the UK), but not in others (e.g. in Germany).

The current article seeks to understand categorization practices in epidemiology from a sociological point of view by focusing on the categories used to generate knowledge on im/migrants and ethnic groups with regard to tuberculosis (TB). TB is a communicable infectious disease with a long and multifaceted history in European countries (Condrau and Worboys, 2010). The so-called ‘white plague’ (or phthisis) was widespread in the 18th and 19th century. In the 20th century, the prevalence and mortality associated with TB dropped dramatically in many

industrialized countries due to improved living and working conditions, improved hygiene and advances in the prevention, medical treatment and cure of the disease. Germany and the UK are now considered ‘low-burden countries’ compared to other regions of the world, including parts of Asia and Africa, where TB incidence, prevalence and mortality are much higher (WHO, 2016). However, TB still constitutes a public health concern in these countries and has been recently reframed as a ‘migrants’ disease’ (Kehr, 2010: 162).

Before taking a closer look at the categorization practices associated with this discursive re/framing, we will first outline the background and theoretical approach, clarify key terms and describe the aims and methods of the discourse analysis.

Categorization, classification and health governance

The measurement of the health, illness and mortality of a ‘population’ is a central feature of power and biopolitics in modern societies (Foucault, 1972, 1984). Since the 18th century, public health surveillance systems have been developed to generate statistical and epidemiological knowledge to govern the health of the population in the emerging nation state. Categories were introduced which divide populations into sub-populations to better understand which segments of the population are mostly affected, and to describe characteristics of groups at increased risk of certain diseases. These categories and classification systems are both a product of specific power constellations and they unfold power effects.

A large body of sociological literature explores the social construction of classification systems in administration, science and medicine (Bowker and Star, 2000; Epstein, 2007; Fleck, 1979 [1935]; Hacking, 1986). These works challenge essentialist and naturalizing views on categorization, pointing instead to the role of the social. For example, Geoffrey Bowker and Susan Leigh Star (2000) show that the international classification of diseases (ICD) is based on socially situated understandings of disease. It is the product of various processes of contention and negotiation, and the categories are neither neutral nor objective. Instead, they reflect and enable specific perspectives: ‘(. . .) each category valorizes some point of view and silences another’ (Bowker and Star, 2000: 5). Categories thus always reflect the perspective of their creators – an aspect also referred to as ‘partiality’ (Polzer, 2008: 480) in classification theory. Furthermore, classifications are not merely descriptive, they are productive in a Foucauldian sense: they have performative effects in that they ‘form the objects of which they speak’ (Foucault, 1972: 49).

Controversies surrounding the categorization of im/migrants and ethnic groups

Migration is of interest to epidemiology as infectious diseases can obviously travel with people across borders. However, it is worthwhile to take a closer look at the

seemingly self-evident and reconstruct the categorizing practices (and their ‘partial’ perspective) in sociohistorical context. National public health systems usually do not keep track of infectious diseases in the context of *emigration*. Instead, surveillance practices generate information only on those individuals and groups that *immigrate* to the respective country.

Migration-related categorization practices differ. In addition to country of birth, country of origin, citizenship or nationality (to name some of the most prevalent classifications), ethnicity is used in some countries, including the UK (Aspinall, 2011, 2002), but not Germany, where no race and ethnicity categories have been used in social and health statistics since WWII, at least not explicitly. Given the diversity of data collection practices, the ECDC has worked towards ‘harmonization and standardisation’ of data collection and reporting practices to improve data quality and comparability since its inception in 2005 (2009: 35). This resonates with a general trend towards increased standardization and ‘harmonization’ of migration statistics in the European Union (Kraler et al., 2015).

It is acknowledged, however, that generating quantitative knowledge in the context of migration and infectious diseases is somewhat problematic: international public health actors note ‘political sensitivities’ and a ‘risk of misuse’ (WHO, 2010: 6). The data generated with these categories can feed into stigmatization and ostracization of im/migrant and ethnic minorities, but it can also illustrate and address the legitimate needs of these groups to improve services and access to care (ECDC, 2009: 36; WHO, 2010). The data may thus serve a political agenda of exclusion, and/or an agenda of inclusion, health equity and human rights. For these and other reasons (e.g. related to ethics and data protection), the collection of data on im/migrants and especially on ethnic minorities is considered highly controversial in many countries (WHO, 2010).

A lively debate is also taking place in academic discourses on the use of migration and ethnicity-related categorization in health statistics and epidemiology. Here, questions have been raised regarding the scientific value and limitations of such categories (Aspinall, 2011, 2002), and ‘measurement difficulties’ have been described (Bhopal, 2014: 17). Categorization practices relating to ethnicity have also been criticized on theoretical grounds. Following the sociological tradition of Max Weber, ethnic identities are conceptualized as fluid, subjective and situated, and their changing and context-dependent nature undermines the treatment of ethnicity as a quantitative ‘variable’, i.e. as an objective, stable sociodemographic characteristic (Fenton and Charsley, 2000). Further problems exist regarding the proximity of ethnicity categories to ‘race’ categories and the tendency of using ethnicity as a replacement for ‘race’ in epidemiological research (Afshari and Bhopal, 2002). Not unlike debates in social statistics (Supik, 2014), some argue that racialization contributes to racism in health discourses (Reitmanova and Gustafson, 2012), while others insist that ‘race’ and ethnicity categories are necessary for documenting and addressing racism and discrimination in the context of health and health care (Bhopal, 2014).

Aim and study design

The current analysis is part of a larger study, the ‘Changing Categories’ project, which aims to understand the genesis and function of epidemiological categories specifying ethnic groups and migration-related characteristics of populations in HIV/AIDS and TB health reporting from a sociological perspective. The current analysis focusses on TB only, comparing the categories used in TB health reporting in Germany and the UK. The following research questions are pursued:

1. How – with which categories and classifications – is public health knowledge about im/migrants and TB produced, stabilized and changed?
2. How are the epidemiological categories constructed – within specific sociohistorical contexts?
3. How do the categorization practices display power effects, e.g. through contributing to meaning patterns (‘interpretive frames’) and by informing public health interventions such as prevention and screening/testing policies?

Methodology

The study applies a *Sociology of Knowledge Approach to Discourse Analysis* (SKAD) (Keller, 2013). The main focus of the analysis is on the time period 1980–2014. The data corpus includes the yearly reports of public health institutions in charge of TB health reporting as well as weekly and monthly reports.¹ With regard to the German material prior to 1990, we focus on health reporting in *West* Germany. Also included are scientific articles and relevant policy papers, laws and regulations. We also conducted expert interviews with representatives of public health institutions as well as social scientists, and civil society actors in Germany and the UK. All data were analysed according to the interpretive procedures of SKAD (Keller, 2013) with elements of Grounded Theory. Details on the methodological approach are described elsewhere (von Unger et al., 2018).

Results

Migration and ethnicity categories in early UK reporting

In the UK, the current discourse on immigrants, ethnic minorities and TB started to take shape during the 1950s when overall TB rates were declining due to improved social and living conditions as well as advances in the prevention and medical treatment of TB. At the same time, immigration changed following the Second World War, with im/migrants from New Commonwealth countries arriving in the UK in larger numbers than before. Some of these im/migrants came from countries with high TB rates such as India and Pakistan. TB reporting highlighted that these groups had increased rates of TB and used the term ‘immigrants’, sometimes combined with a specification of the respective country of

origin. In this context, the notion of TB as being ‘imported’ into the UK emerged – contributing to a ‘moral panic’ about the supposed threats of immigration, and prompting calls by the medical establishment for medical examinations before or after immigrants’ arrival (Welshman, 2000: 878).

In the late 1970s, following social upheavals and new legislation addressing racial discrimination (i.e. the 1976 Race Relations Act) in a society that was becoming increasingly diverse, ethnicity categories were introduced in health reporting. A classification of ‘ethnic origin’ was taken from the *National Housing and Dwelling Survey* and introduced in the 1978/1979 TB survey (Medical Research Council (MRC), 1980). The classification system had originally been designed for the 1981 census, but was abandoned due to problems in preceding field trials (Sillitoe and White, 1992). The categories were nevertheless used in government surveys, like the *National Housing and Dwelling Survey*, and with the 1978/9 TB survey, they also found their way into epidemiological studies. The following nine categories were included in a classification of ‘ethnic origin’: White, Indian, Pakistani and Bangladeshi, West Indian, African, Arab, Chinese, Other (including patients of mixed origin), Unknown (MRC, 1980). The internal logic of this classification system conflates ‘race’ (by using the phenotypical marker ‘white’), nationality (e.g. Indian), ethnocultural identity (e.g. ‘Arab’) and geographic region (e.g. ‘African’). The creators aimed to take the self-identifications of the groups thus categorized into account.² The categories also reflect a colonial legacy (e.g. ‘West Indian’). The category ‘white’ is put first and implicitly defines the norm. The classification system is implicitly rooted in an underlying racialized binary of ‘white’ and ‘non-white’ groups.

UK TB reporting during the 1980s and the construction of ‘risk’

In the 1980s, TB surveillance in the UK observed a continued decline.³ Many health reports, however, stressed the differences between various population groups and pointed to the relatively high rates among certain ethnic groups, in particular the ‘Indian sub-continent (ISC)’ group (a category encompassing people from India, Pakistan and Bangladesh). Ethnicity categories were combined with migration-related categories (‘year of entry’) and a subgroup of ‘recently arrived’ im/migrants from India, Pakistan and Bangladesh was identified as having particularly high rates, thus confirming the meaning pattern of im/migrants and ethnic minorities ‘importing’ TB to the UK (MRC, 1985). In addition, there was a growing concern about a possible ‘increased risk of infection’ for the ‘white’ population living in areas also inhabited by other groups (MRC, 1982). Some studies were concerned with the potential risk of transmission from any ‘non-white ethnic group’ to the ‘white ethnic group’ (Nunn et al., 1984; Springett et al., 1988). While no evidence was found for this kind of cross-ethnic transmission, the concern itself further contributed to the construction of ethnic minorities and im/migrants as ‘vectors of disease’.

Some studies explored possible cultural factors contributing to increased TB rates among people from the Indian-subcontinent group (ISC) using the term 'Asian immigrant tuberculosis' (McCarthy, 1984). While use of the term 'Asian' was disputed, the term 'Asian immigrant tuberculosis' implied that not only newly arriving immigrants but whole communities might pose a risk to the British population. Remarkably enough, the observation of high TB rates among certain population groups was not linked to other social and environmental determinants of health. Instead the discourse revolved around origin (and implicitly culture), categorized as ethnicity. Epidemiological attention focused on the importation of TB by newly arriving immigrants. Especially the data on the 'ISC' group showed that people born in the UK, although belonging to a certain ethnic group, were less likely to have TB compared to people who recently migrated (MRC, 1986, 1992). In this way, the strong discursive association of immigration and TB persisted. The 'risk' constructed in the discourse of the 1980s remained first of all a risk from abroad.

Standardization and racialization in 1990s UK TB reporting

The 1990s were characterized by the standardization of ethnicity categories across social and health statistics. Ever since the failed attempt to implement an ethnicity classification system in the 1981 census, there remained an ongoing demand by government authorities to collect data on ethnicity (Booth, 1983). Eventually, after a lengthy consultation process including academic and community representatives, a renewed classification system was introduced in the 1991 census. This enabled public agencies and private organizations to monitor anti-discrimination policies and to plan the provision of services. The introduction of the census ethnicity categories marked the starting point of a comprehensive standardization process concerning the measurement of ethnicity in administrative contexts in the UK, including public health. In TB health reporting the former categories 'West Indian' and 'African' were replaced respectively by 'Black-Caribbean' and 'Black African'. In addition, 'Black Other' was introduced as a new residual category. The increased usage of the descriptor 'Black' racializes this classification system further. While the former system operated with 'white' as the only category referring to phenotypical features, the dichotomy of 'white' and 'black' now seems to be a particularly relevant line of differentiation.

The overall discourse on TB at that time was characterized by a growing alarmism, due to the rise in TB cases worldwide that was paralleled by a slight increase in notification rates in the UK. This latter trend seemed to end the dramatic overall decline of notification rates evident since the beginning of the 20th century (Kumar et al., 1997; Rose et al., 2001). Multiple factors were assumed to be implicated in this development, including an improved notification practice and the likely contribution of HIV/TB co-infection. Apart from that, as a result of a 'new public health' orientation in policy, there was a growing awareness of the impact of socio-economic determinants, such as poverty and homelessness; socioeconomic

deprivation was perceived as substantially contributing to TB rates in ‘all ethnic groups’ (including ‘white’) (Ormerod et al., 1998: 181). This drew attention to their vulnerability and status of being ‘at risk’ of contracting TB. In this context, im/migrants and ethnic minorities were no longer mainly constructed as ‘a risk’, but also as ‘at risk’ and thus in need of improved health and services. Despite this new perspective, however, other statements in the discourse reproduced the familiar meaning pattern of im/migrants and ethnic minorities posing a risk to the ‘white’ population.

UK health reporting at the turn of the century

Towards the end of the millennium, this dominant pattern altered slightly. In the 1998 TB survey, more than half of the persons infected had been born abroad. Again, findings in the ‘ISC’ population suggested that recently arrived immigrants showed the highest rates. Thus, the focus again shifted from im/migrants and other ethnic minorities to *newly arrived migrants* from countries with a relatively high TB burden posing a risk to the British population. This occurred at a time of mounting political anxieties about increases in immigration (Hawkins, 2015). A growing proportion of im/migrants were refugees and asylum seekers from African countries, the Middle East and former Yugoslavia (Office for National Statistics, 2013).

What seems but a small nuance in the discourse had far-reaching consequences concerning its power effects. The renewed focus on newly arriving im/migrants contributed significantly to the introduction of a pre-entry screening program for TB in 2005. This program requires citizens from countries with relatively high TB rates applying for a visa for more than six months to get tested for TB prior to their arrival in the UK. The program was piloted in 2005, with a list of 15 countries, and expanded to include 101 countries in 2014 (Public Health England (PHE), 2014). It illustrates how the discursive construction of im/migrants as a risk to the health of the British population generated power effects that established health status as a reason for exclusion.

At the same time, ethnicity categories also serve an agenda of inclusion, community involvement and health equity (especially regarding the ‘UK born’ population). The standardization of ethnicity categories across social and health statistics continued in the first decade of the 21st century: the changes made to the ethnicity categories in the 2001 census were adopted in TB reporting (e.g. a ‘Mixed’ category was introduced). However, the changes to the 2011 census (e.g. the introduction of further categories including ‘Arab’ and ‘Gypsy or Irish traveller’) are not reflected in TB reporting in the second decade (e.g. PHE, 2014, 2015). Neither this deviation nor the differences between the census versions for England, Scotland and Wales (2001 and 2011) can be explored in depth here. Overall, ethnicity categories in the census have diversified since the 1990s, through census development programmes as well as community pressures and user demands (Aspinall, 2011). The main merit of using census categories in public health is seen in the improved analysis of risks of discrimination and

disadvantage – while it is acknowledged that some questions and lingering problems of ethnicity categorization remain unresolved (Aspinall, 2011).

TB reporting in Germany: The invention of ‘foreigner tuberculosis’ in the 1980s

Germany also experienced a dramatic decrease in TB notification rates over the course of the 20th century.⁴ However, unlike the UK, no ‘race’ or (racialized) ‘ethnicity’ categories have been used in social and health statistics since WWII. Thus, no ethnicity categories were used in TB health reporting. Categorization practices in the 1970s and 1980s focused on nationality and in particular the distinction between the German population and ‘foreigners’ (*Ausländer*). The group ‘Ausländer’ was not differentiated into subgroups, for example by country of origin or country of birth; it was treated like a single, unified and homogenous group. The category ‘Ausländer’ derived from federal law (*Bundesseuchengesetz*, Federal Plague Law) determining which data were to be collected in the public health system.

In effect, these categorization practices create two groups: the general population and ‘foreigners’. ‘Ausländer’ were singled out as a separate entity, also visually, as in bar charts depicting the share of foreigners not *within* the bar for the ‘total population’, but next to it (Deutsches Zentralkomitee zur Bekämpfung der Tuberkulose (DZK), 1985: 32). Furthermore, the category served to focus on a problem in the context of an overall less problematic situation. Statements included a double message: the TB problem is on the decrease (overall), but at the same time on the increase (among foreigners). This problem was communicated in more alarmist ways over the course of the 1980s and the term ‘foreigner tuberculosis’ (*Ausländertuberkulose*) played a crucial role. ‘The problem of foreigner tuberculosis’ was considered to be ‘the result of one population group with a different epidemic status integrating into another and maintaining their own tuberculosis-related conditions here for a while’ (DZK, 1984: 9). ‘Foreigners’ are referred to as ‘one population group’ with ‘their own’ TB-related conditions – as if all foreign nationals stemmed from countries with the same TB-related conditions.

In the 1980s, im/migration was dominated by labor migration following the recruitment agreements Germany had signed with selected countries (e.g. Italy, Spain, Greece, Turkey) in the 1950s and 1960s. During the 1970s, these agreements were terminated and the so-called ‘guest workers’ were encouraged to return to their countries of origin as Germany was not (yet) considered an immigration country. In public discourses in the 1980s, foreigners were often framed as different and viewed as temporary ‘guests’. The term ‘foreigner tuberculosis’ implied that foreigners had a different kind of TB which was described as taking ‘a stormy form’ while being ‘accompanied by more symptoms’ (DZK, 1984: 9–10). The term ‘stormy’ connotes the power of a natural force (a storm), that is dangerous, forceful and uncontrollable. This use of language in health reporting resembles public and political discourses at the time that used similar metaphors such as ‘flood’ or ‘wave’ when referring to migrants and asylum seekers (Link, 2006; Niehr and Böke, 2008).

German TB reporting in the 1990s: New categories were needed

In the 1990s, following German reunification, the breakdown of the Soviet Union and the civil war in former Yugoslavia, migration to Germany increased and diversified. Among the new arrivals were asylum seekers and ‘ethnic German resettlers’ from Eastern Europe (in German: ‘Aussiedler’/‘Spätaussiedler’). However, given the legal limits of data collection in TB reporting, public health reporting was still unable to provide data on subgroups, for example by countries of origin. Furthermore, the resettlers from Eastern Europe remained entirely invisible since they were entitled to German citizenship and thus classified as part of the general (i.e. German) population. This new situation was identified as an urgent problem: health reports mentioned the increased migration rates quoting social statistics without being able to relate these data to the TB reports. The health reports also referred to international TB discourses noting that a majority of asylum seekers were from regions with high TB prevalence in Eastern Europe, Asia and Africa (DZK, 1992). In the following years, the absolute numbers and incidence rates among ‘foreigners’ decreased further and public health specialists were increasingly frustrated with the limitations of the available data. The reports point to an ‘alarming situation in parts of middle and Eastern Europe’ (DZK, 1997: 5) noting a ‘dangerous multi-resistance’ especially in ‘patient groups from the former Soviet Union’ (DZK, 1999: 5) without being able to provide data on these statements.

New categorization practices were thus called for in health and social statistics. To try out new categories for TB reporting, a study in 1996 collected information on patients diagnosed with TB including the patients’ nationality, country of birth, date of entry and legal status such as being an asylum seeker or a resettler (DZK, 1997). This study showed that a more differentiated data collection and analysis was helpful in epidemiological terms. When a new Infectious Disease Law came into effect in 2001, it included suggestions deriving from this study. The law specified that for all new reports of a TB diagnosis, information must be provided on nationality and country of birth.

German TB reporting at the turn of the century

On this new basis, TB reporting became more differentiated in the 2000s. However, in the decade following the introduction of the new categorization, it is noticeable that the classification of citizenship/nationality with the two main categories ‘German nationals’/‘foreign nationals’ continues to be the most prominent dimension of difference in the published reports. For example, in a TB report for the year 2013, the ‘key facts’ in the front of the publication are organized by nationality (listing two categories: Germans and foreign nationals) as well as country of birth (listing two categories: born in Germany and born in foreign country).⁵ Further back in the report TB cases are reported by country of birth, listing the 10 most often reported foreign countries (including Turkey, the Russian Federation,

Romania, India, Somalia, Poland, Pakistan, Vietnam, Kazakhstan and Afghanistan). The report also states that people from the Newly Independent States (NIS) more often than people born in Germany are diagnosed with drug resistant TB (there were three cases of extensively drug resistant (XDR) TB) (Robert Koch Institute (RKI), 2014: 5).

Overall, TB reporting in Germany has changed profoundly since the 1980s. Nevertheless, certain patterns are quite stable: for one, the demarcation between German and non-German nationals remains prominent. However, since the turn of the century a new language has been introduced (e.g. 'foreign nationals' instead of 'foreigners') and more information is generated on the specific countries and regions of origin of persons diagnosed with TB – focussing on nationality and place of birth. This information is usually presented following data presented by gender and age suggesting that the latter demographic categories are considered more fundamental. Notably absent from published reports are references to persons with a 'migration background', a category introduced in social statistics which comprises the offspring of immigrants (see Horvath and Will, this volume). Instead, the categorization practices in TB reporting focus exclusively on first generation im/migrants.

Another characteristic pattern in reporting since the 1980s is the construction of im/migrants as 'carriers of disease' who 'import' TB to Germany from their countries of origin. This is not limited to the TB discourse as can be seen in an administrative instruction specifying the implementation of the new infectious disease law introduced in 2001. According to this instruction, its purpose is 'to prevent the importation of dangerous, communicable diseases into the Federal Republic of Germany' (BMG, 2013: IfSGInfo-VwV §1). While the construction of im/migrants as (potential) 'carriers of disease' applies to a range of infectious diseases, it is particularly pertinent in the TB discourse. The latter entails a persistent association of im/migrants with a more dangerous type of TB. The metaphorical language of the 1980s referencing a 'stormy form' of the 'foreigner tuberculosis' found in Turkish 'guest workers' has been replaced by medical acronyms describing drug-resistant forms of TB in im/migrants, particularly from the NIS. Thus, the particular form of the construction has changed, but the content of the underlying meaning pattern has remained the same: there is a danger associated with im/migrants as (potential) 'carriers of TB'.

It has to be noted, however, that both the TB discourse and the broader public health discourse include positions contravening this meaning pattern. These are discursive positions using the same categories to point to a different problem: the vulnerability and special health needs of specific im/migrant groups. Both positions coexist, applying the same categories for conflicting agendas.

Discussion and Conclusions

Germany and the UK both experienced migration developments in the second half of the 20th century that were relevant to their epidemiological discourses on TB.

Both public health systems addressed the new problem(s) by introducing new categorization practices to improve their health governance. Both systems developed categorization practices that generated more detailed im/migration-related data illustrating an increased concern about im/migration at a time when TB no longer constituted a major public health threat within the nation's boundaries. The UK introduced ethnicity categories as well as migration-related categories, while Germany opted for migration-related categories only.

The legacy of colonialism is quite visible in the British categorization practices introduced to govern a diversifying postcolonial society. The increased immigration of citizens from the commonwealth following WWII resulted in a more diverse British population in the UK. In this context, nationality could not be used as an indicator for difference. Instead, ethnicity classifications were introduced (combined with categories indicating recent im/migration) to differentiate groups and subgroups by 'origin', culture and racialized notions of group differences *within* the British population. This may be interpreted as a more sophisticated way of identifying and generating the 'other' within the boundaries of a nation state (Hacking, 1986; Reitmanova and Gustafson, 2012). However, the categories serve multiple functions and thus unfold ambivalent power effects. In the UK, social protest shaped the political landscape, and the dynamic relationship between 'group identifications' and 'social classifications' revealed in the concurrent community consultation processes was one of the driving factors behind the change of the administrative categories in social and health statistics over time (Aspinall, 2011).

In the German discourse, the history of colonialism is less visible. However, WWII, the holocaust and its aftermath have left strong marks. While the UK also avoided explicit 'race' classifications (albeit using racialized ethnicity categories), the German discourse avoided 'race' and 'ethnicity' categories altogether – based on the historical lesson that such categories were scientifically dubious and politically dangerous. The national socialists had taken 'ethnic cleansing' to an extreme and the legal organization of German nationality (based on the 'jus sanguinis' principle) established Germany as an 'ethnic nation' (Bauder, 2014: 13). The so-called guest workers of the 1960s and 1970s labour migration did not possess German citizenship. Categorization practices treated these 'foreigners' as a separate and homogeneous group. However, during the 1990s, in the wake of the im/migration of 'ethnic German resettlers' (who did possess German citizenship) new categories were introduced. These new administrative categorization practices introduced more differentiated health reporting by nationality and country of birth.

Categorization practices of TB health reporting reproduce the boundaries of the nation states, making epidemiology a 'nationalist methodology' (Wimmer and Glick-Schiller, 2003: 577). TB is increasingly conceptualized as a threat 'from the outside' – leading to the construction of im/migrants as (potential) 'carriers of disease'. This construction results from a number of practices including (a) epidemiology's focus on im/migration (instead of emigration or mobility), (b) its reproduction of the boundaries of the nation state, (c) its general focus on problems (as a legitimizing basis for intervention and policy making) and (d) its specific

procedures of categorization and interpretation. The construction of im/migrants as 'carriers of disease' is tied to a larger interpretive frame positioning im/migrants as a threat to the nations' well-being. Mary Douglas (1966) described the symbolic construction of entities like states as bodies whose boundaries are precarious and under constant threat. In this conception the discursive construction of migrants as 'vectors of infection' and 'carriers of disease' makes their border crossing appear like the 'very mechanism of entry of pathogens' (Pussetti and Barros, 2012: 44). In the context of TB epidemiology, the metaphorical 'pathogens' assume a biomedical reality reinforcing the meaning pattern and leading to 'othering' and exclusion (Craig, 2007).

However, in recent years, especially since the 1990s, a dual conceptualization of im/migrants and ethnic minorities has emerged as they are not only perceived as 'a risk' (to the so-called general population). They are also perceived as 'at risk', i.e. as vulnerable and entitled to health care and support. The concept of vulnerability is closely tied to discourses of human rights, social justice and health equity. These positions are also found *within* epidemiology and public health institutions. Speaker positions embedded in this second meaning frame of 'vulnerability', equity and inclusion argue for the introduction of im/migrant- and ethnicity-related categories in health reporting to improve the health of im/migrant groups and their access to health care (Aspinall, 2002, 2011; Bhopal, 2014). Mirroring the debates surrounding social statistics, it is argued that the categories are needed to address exclusion and discrimination as a problem. However, given its focus on diseases, epidemiology deals with a highly sensitive subject matter that locates the categorized groups in the context of ill health, i.e. creates these groups in a discourse dominated by interpretive frames connoting danger and fear. This power effect of categorization practices is not specific to TB, but is particularly strong in TB discourses which tend to involve less community stakeholders (and more medical stakeholders in strong speaker positions) as compared for example to other communicable diseases such as HIV/AIDS (Scott et al., 2017).

The introduction of ethnicity categories in the UK, but not in Germany, is clearly not arbitrary. As this analysis shows, it is tied to a colonial history and post-colonial developments that required and enabled this type of differentiation that creates an (ethnicized and racialized) 'other' within the British population. While the categorization practices may be interpreted as a biopolitical technology (Foucault, 1984) that reproduces established interpretive frames and power hierarchies, they also entail potential for subversion and change by offering greater opportunities for group identification and political participation of the groups thus categorized.

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Notes

1. Most of the documents cited in this analysis are published by the Medical Research Council (MRC), Health Protection Agency (HPA) and Public Health England (PHE) for the UK. For Germany, most sources are reports published by the Federal Ministry of Health (BMG), ‘Deutsches Zentralkomitee zur Bekämpfung der Tuberkulose’ (DZK) [German Central Committee in the Fight against Tuberculosis] and the Robert Koch Institute (RKI).
2. Tensions between scientific and administrative positions surrounding the choice of ethnicity categories were also described in the expert interviews. Prevalent self-identifications were assessed in the field trials and the consultation process surrounding the introduction of ethnicity categories in the UK. Similar processes took place in social statistics (e.g. Supik, 2014: 325).
3. To give the reader a sense of the dramatic decline which started to level out in the late 1980s: the overall notification rates in England and Wales dropped from over 100,000 cases per year in 1913 to less than 6000 cases per year in the 1980s. Since the 1990s, the number of TB case notifications varied between 6000 and 8000 cases per year (PHE, 2015).
4. The decrease was similar but the leveling out occurred two decades later and at a lower level: there were over 150,000 new TB cases per year in post WWII (West) Germany in 1949; these absolute numbers dropped to approx. 36,000 new TB cases in 1974, less than 20,000 new cases in 1984, approx. 13,000 new cases in the reunited Germany in 1994, approx. 6,500 new cases in 2004 and about 4500 new TB cases in 2014 (DZK, 1985, 1990; Pöhn and Rasch, 1994: 88; RKI, 2015).
5. TB cases reported by nationality ($n = 4060$) included German nationals (2096, 51.6%) and foreign nationals (1964, 48.4%); TB cases by country of birth ($n = 4083$) were listed for people ‘born in Germany’ (1774, 43.4%) and ‘born in foreign country’ (2309, 56.6%) (RKI, 2014:11).

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