Provincialising Waste – the transformation of ambulance car 7/83-2 to tro-tro Dr.JESUS

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Abstract

This article is concerned with the material and social transformation of a German ambulance car into a Ghanaian minibus – in Ghana called tro-tro. It tracks the journey of a Mercedes Benz 310 from Winnenden in Germany to Kumasi in Ghana, and elicits the transformation of Rettungswagen 7/83-2 to tro-tro Dr.JESUS. Tracing the car's geobiography enables us to explore a specific material relation between Europe and West Africa. Considering debates on technology transfer and transformation we argue for a nuanced understanding of ‘fluid technologies’ that includes opportunities but also emphasis the dangers implicated in transfer and transformation of objects. Furthermore, by locating the re-used bus as an object of international trade in discarded objects, we introduce the notion of ‘provincialising waste’ to underline changing uses and values of objects. This article suggests that careful attention needs to be paid to the ambivalent geobiographies of second-hand objects.
1. Introduction

One can still see the inscription on the side: *Rettungswagen* – rescue car. On the front it reads Dr.JESUS. We are at Kejetia bus station in Kumasi, Ghana’s second biggest city, and the car with the inscriptions is a Mercedes Benz 310. The Mercedes is a Ghanaian bus – locally known as *tro-tro*\(^1\) – and transports people from central Kumasi to surrounding suburbs and back. Public transport in Ghana is mostly privately run and organised through small-scale, often one-bus enterprises\(^2\). However, this does not mean that transport is unregulated. Drivers register their car with a bus station, and the management of the stations is organised through local trade unions, which in turn are part of the national Trade Union Congress (TUC). The unions regulate the stations and organise travel routes. Drivers apply to become members of the union, which includes paying booking and union fees as well as taxes. In return the station management supplies drivers and their buses with fixed routes, sets passenger charges and allocates travellers to cars\(^3\). Seat allocation works on a first come, first served basis. Tro-tros don’t run to a set time schedule, but leave when they are full, which means waiting times can be anything between two minutes and hours. Passengers often use this waiting time to buy catering for the travel from hawkers surrounding the cars. But with tropical temperatures around 30° Celsius and lack of breeze it still requires considerable patience. Travelling in a tro-tro is an intimate experience; around 20 people are squeezed closely next to each other in the minibuses in order to make most of the limited space\(^4\). Moreover, humans are not the only travelers in tro-tros – bigger animals, like goats, and other bulk luggage travel on the roof, while chickens or various food items can often be found in the foot well.

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\(^1\) *Tro-tro* is a Twi nickname and refers to the bus fare one once had to pay: three pesewas-three pesewas.

\(^2\) There are also two state public transport companies connecting bigger cities in Ghana and the region – STC and Metro Mass Transport – but the majority of transport works via private, small-scale enterprises.

\(^3\) The management structures surrounding minibuses can be exploitative and have even been described as mafia-like. For a thoughtful analysis of Nairobi’s *matatu* industry between entrepreneurs and thugs see Mutongi (2006).

\(^4\) The cars come in different sizes, thus some tro-tros carry more or less than 20 people. Also many minibuses are considerably overloaded, both with passengers and with goods. We will come back to this later in the article.
Kejetia station is the largest bus station in Kumasi. The station is located adjacent to the market, one of the biggest in West Africa, and accordingly the bus station is one of the biggest transport hubs in the country. The bus called Dr.JESUS that this article analyses, runs from Kejetia station. But as the *Rettungswagen* inscription on the side of the car suggests, the bus once also served another purpose. For years it was an ambulance in the German city Winnenden. While travelling from North to South the car has (been) transformed from an ambulance into a bus, a means of public transport. In the course of this transition the car has stayed the same in some ways – it is for instance still a
Mercedes Benz 301 – however at the same time it has also changed significantly\(^5\). But what exactly has stayed the same, and what has changed? How might we appreciate such a flexible and enduring technology?

![Picture 2: Dr.JESUS at Kejetia Bus Station in Kumasi, Ghana (Picture by the authors)](image)

2) Provincialising Waste

Addressing these questions and engaging the concept of fluid technologies, we introduce the notion ‘provincialising waste’ in order to discuss ambulance 7/83-2’s transformation into Dr.JESUS. As the car’s continued use proves the transformation is a success story and it cannot be considered as waste. However, at the same time traffic accidents involving old cars are a serious health hazard in sub-Saharan Africa. The ambulance,

\(^5\) For instance, the stretcher in the back had to be removed and was substituted with passenger benches. More on the physical transformation of the car in later sections of the paper.
which was designed in Germany to serve human health, now presents a danger on Ghanaian roads. Investigating the fluidity of this car, therefore, not only offers insights into the strengths of fluid technologies, but crucially also into their dangers. By linking up with and nuancing theoretical debates on the character of objects and their translatability (Akrich, 1992 & 1994; de Laet and Mol, 2000; Latour, 1987), this article highlights the ambivalences of fluidity with regard to a concrete case. In doing this we add another layer of understanding to these debates, and show how one might conceptualise fluidity in a way that is able to account for both these strengths and dangers.

However, the story of Dr.JESUS is not only a story about fluidity and dangers of technological objects. It is also about how material things travel – are traded, (re-)used and transformed – in a postcolonial world. The trade in used cars forms a specific dimension of postcolonial relations, and enables us to analyse what is called 'Wohlstandsmüll' in German – the refuse of affluent societies. As such Dr.JESUS is one in a million, together with countless other goods – old clothes, electronics, and even food residues. The car is one discarded object among many that travel from rich to economically deprived countries. In this sense the story told here is rather ordinary; nevertheless it is curiously difficult to do justice to the complexities at play. Dr.JESUS is an indicator of both wealth and poverty, but at the same time transcends these categorisations. The car is neither only waste, nor a 'failed' object. It is robust and still functioning after its transformation. However, at the same time this success is fragile – using the car as a bus in Ghana means a latent danger for its passengers. Considering debates on waste and disposal (Gregson et al., 2007; Hetherington, 2004; Lepawksy & Mather, forthcoming), we introduce the notion of ‘provincialising waste’, and suggest to understand the material, social and political transformation of the bus as interwoven and co-constitutive, rather than as a simple
transfer of a material object from one place to another.

The question of how technologies might be transferred from one place to another has long been the subject of technology studies under the term ‘technology transfer’. However, often these accounts document failure rather than success. For instance, Madeleine Akrich showed how small changes in a technology-society network can result in the disintegration of technology (1992; 1994). She argues that technology is context dependent, and has to be understood and made to work in its socio-technological network. Technology transformation and context are profoundly entangled with each other. Following Akrich, we understand ambulance 7/83-2’s transformation into tro-tro Dr.JESUS as a complex process that has a profound impact on its environment and cannot be understood without the social relationships involved.

While Akrich is concerned with failed technologies, Dr.JESUS is not a failure; it has not disintegrated but is still running – now on Ghanaian roads. In this sense Dr.JESUS could be understood as a successfully translated object or an “immutable mobile” (Latour, 1987). To Bruno Latour immutable mobiles are objects or technologies that hold their relational shape while moved/-ing around. They enable scientific techniques, data or indeed material objects to travel from one place to another.

But, this is not quite accurate either for Dr.JESUS: in order to be able to run as a bus in Ghana the car needs to be transformed physically, it does not hold its shape. In their analysis of *The Zimbabwe Bush Pump* Marianne de Laet and Annemarie Mol explore how adaptation, reconfiguration and

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6 In this regard we build on, but ultimately depart from earlier work exploring the social and political life of things (Appadurai, 1988), and recent work on the material culture of cars (Miller, 2001). Particularly relevant is Verrip and Meyer's chapter "Kwaku's Car: The Struggles and Stories of a Ghanaian Long-Distance Taxi-Driver", beautifully giving us an insight into the work, life and hardships of a taxi driver in Ghana (2001:153-84).

7 Latour’s initial notion served to explain how science abstracts from the local and produces universal facts. Such immutable mobiles then can be used to establish control over distances (Latour, 1987, 1999). For a slightly different twist of this point see as well as John Law's study of Portuguese shipping vessels (1986).
changeability can as much define a successful object as immutability (de Laet and Mol, 2000). While staying identifiable as a pump, the object is adapted and changed by the inhabitants of the villages, where it has been installed. As de Laet and Mol argue the bush pump's strength is not primarily its translatability, but rather its fluidity. It changes shape as well as its effects in different settings:

The Zimbabwe Bush Pump is solid and mechanical and yet, or so we will argue, its boundaries are vague and moving, rather than being clear or fixed. Likewise, the question as to whether or not the Bush Pump actually works, as technologies are supposed to, can only rarely be answered with a clear-cut 'yes' or 'no'. Instead, there are many grades and shades of 'working'; there are adaptations and variants. Thus the fluidity of the pump's working order is not a matter of interpretation. It is built into the technology itself. (ibid: 225)

Thus, objects do not have to be immutable to be successful, fluidity and changeability can also determine a successful object. But the subtleness or gentleness of change is important. In this way of thinking, an object may be imagined as a set of relations that change while, at the same time, stay the same (Law and Singleton, 2005). When objects are understood as a set of multiple relations, they have to be understood as part of a fluid topology (Mol and Law, 1994; Law and Mol, 2002). As we will show in the following, our object of enquiry enables us to add another layer of understanding to these conceptual debates. The successful transformation of ambulance into bus attests to the car's fluidity. But for Dr. JESUS this fluidity comes with a prize. By doing physical changes to the ambulance car, the new bus not only becomes a vehicle for mass transport, but also less

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8 As Law and Mol point out, paying attention to multiplicity and topology go together: "Multiplicity is thus about coexistence at a single moment. To make sense of multiplicity, we need to think and write in topological ways, discovering methods for laying out a space, for laying out spaces, and for defining paths to walk through these" (Law and Mol, 2002: 8).
stabile and as a consequence more dangerous. While objects are fluid and adaptable, we suggest that this fluidity has to be understood as an ambivalent achievement.

However, not only the changes of the material object over time have to receive attention in order to understand the car’s changed function and value. We equally need to analyse the process of transformation and the car’s geographic trajectory – its ‘geobiography’. Tracing Dr.JESUS’s geobiography leads us to follow a particular connection between Europe and West Africa. As an ambulance the car had lost its usefulness in Germany. Shipping it to a West African state is, thus, a way of disposal. However, the car’s fluidity allows Rettungswagen 7/83-2 to turn into tro-tro Dr.JESUS, and the car to continue to drive on roads. This continuity presses us to rethink the category of ‘waste’ beyond mere dumping. Following Kevin Hetherington, who has re-conceptualised disposal as placing:

Disposal, I contend, is not primarily about waste but about placing. It is as much a spatial as a temporal category. Terms like ‘waste disposal’ and ‘waste management’ are misnomers. Rather, disposal is about placing absences and this has consequences for how we think about ‘social relations’. (Hetherington, 2004: 159)

Hetherington argues that when disposal is understood as placing, it becomes apparent that an object does not just disappear when it is out of sight. Waste brings responsibilities with it, whoever disposes and so re-places an object has to account for the consequences of this action (ibid: 163). Hetherington alerts us that the where of responsibility matters, and describes this as a process implicated in social relations and value judgements. Josh Lepawsky and Charles Mather in their study about e-waste in Bangladesh and Canada make a related point, when they observe: “We expected we would end up in dumpsites, in
piles of waste. Instead we wound up in production sites. We hadn’t followed things consumed, used up, and ejected from the economy – we were right in the middle of it” (Lepawsky and Mather, forthcoming: 2). This experience led them to refocus their study onto “what we might learn if we instead followed actions; if we studied not waste and value, but wasting and valuing” (ibid: 14, emphasis in original).

Combining these approaches, we put emphasis on the practices of placing and wasting – or put differently, on the combination of where and how questions. As Nicky Gregson and colleagues in a study on waste in the UK observed: “to understand contemporary levels of waste generation in the UK requires not just that we hone in on the trajectories and destination points of discarded objects, but that we focus as well on the processes that constitute the social death of things” (Gregson et al., 2007: 698). Similarly, we argue that in order to understand both the uselessness of ambulance 7/83-2 in Germany and the continued use of the bus Dr.JESUS in Ghana, one needs to attend to the practices of trashing, travel and transformation. As we will see in the following sections, this broadens and localises the category ‘waste’. It makes visible that what is considered as waste by one person might be valuable for someone/somewhere else. Such an analysis of discarded objects in international trade deals “simultaneously with the material and immaterial, the cultural and the political” (McEwan, 2003: 343).

The enquiry into the transformation of the car becomes, thus, much more about layers of specific, localised effects of fluid objects rather than about transferring an object or technology. Warwick Anderson calls this conceptual move to ‘provincialize technoscience’. To him “the recent emergence of richly textured, multi-sited studies of modern technoscience attests to the importance of both situating knowledge and tracing its
passage from site to site” (Anderson, 2002: 652). In this vein we suggest to ‘provincialize waste’: the journey of Dr.JESUS has to be understood not as a movement in empty time-space, but as a specific spatio-temporal achievement that connects and re-configures place and polis, wasting and valuing. Thus, together with the Mercedes Benz car this article ventures on a North-South passage, where we explore one specific case of a technoscientific object's journey in a postcolonial world. In our analysis we are particular attentive to how spaces (re)configure objects and vice versa; in doing so, the paper asks how the car’s journey and transformation can be accounted for responsibly – academically and politically.

3. Tracing Dr.JESUS

In the following sections we present three stories of the Rettungswagen 7/83-2’s travel and Dr.JESUS’ transformation – the big, the small and the ugly story. Firstly, we locate the car’s journey within the wider context of global movement of goods and waste. We then sketch the car’s geobiography – focusing on its journey, material transformation and social relationships.

3.1 The big story: The White Man's waste bin

Our object of investigation, the ambulance car, is not the only thing to travel long distances. Most goods we consume today have travelled rather lengthy journeys before they end up on our plates, coat our bodies or provide us with entertainment. It has been well documented that many high-tech products depend heavily on resources mined in poor and politically troubled regions – often fuelling violent conflicts.

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9 Anderson here paraphrases Dipesh Chakrabarty's influential book 'Provincializing Europe' (2000), where he questions the theoretical and analytical concepts underlying western and international scholarship, and argues for a postcolonial rethinking of how knowledge is produced. Anderson's call builds on Chakrabarty's argument when he suggests to bring postcolonial concerns in a closer conversation with science and technology studies.

10 The riches of the African continent continue to get emptied out for technological progress and our 'common good'. It is
The goods that travel from North to South are generally taken to be immaterial. Knowledge and money travels in form of development workers and financial assistance\(^\text{11}\). But this distinction between material goods moving North and immaterial goods southwards is too superficial to capture the complex relations between the global North and South in times of globalisation. Attention has been drawn to the movement of knowledge from South to North, mostly in form of skilled labour – such as the brain drain of health workers (Raghuram, 2009; Mackintosh et al, 2006). On the other hand, diaspora communities in the North have been analysed as motors for development in the South, either directly through returns in capital but also as active global citizens through home associations initiating development projects (Page, Mercer and Evans, 2008).

But there are also movements of material goods from North to South. Notably, used products from Western countries are a familiar, almost omnipresent sight in many African countries. Europe's 'past' can be found literally everywhere. People wear used clothes from Europe, which are cheaply sold at local markets in every corner of the continent\(^\text{12}\). Unwanted cut-pieces of chicken also migrate increasingly from Europe, constituting a popular fast food in West Africa\(^\text{13}\). Such dumping practices destroy local small-scale

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\(^{11}\) This has in the past been tied to the implementation of (highly contested and often failing) free-market reforms – such as the structural adjustment programs in the 1980s. While it is undisputed that the SAPs seemingly improved the economy on the macro-level, the withdrawal of the state, particularly in the education and health sectors, had devastating effects on the micro-level (for an analysis of the impact of SAPs on Ghana see for instance Konadu-Agyemang, 2000). Today, conditionality of aid is approached more subtly, but is nevertheless often directly linked to democratic, rule of law or good governance reforms.

\(^{12}\) Secondhand clothes imports are a dominant and still growing feature of the clothing market in most African countries, the trade has increased ten-fold since 1990, and reached a value of around $1 billion in 2005 (Baden and Barber 2005:4). According to an Oxfam survey 90% of Ghanaians purchase secondhand clothes (ibid: 10). This is, however, not only a financial choice, but has been analysed as a 'cultural economy of taste and style' (Hansen, 2000). Nevertheless, secondhand clothes (together with cheap Asian imports) threaten local cotton industries – particularly in West Africa, where the traditional clothing industry is the second largest employer after agriculture (OECD 2006:49).

\(^{13}\) Imports of frozen cut-pieces into Africa have grown by 200% since 1999. Due to agricultural subsidies overproduction is common, furthermore cut pieces are of little value on the European market, while demand in Africa has increased due to a growing urban population (SOS Faim, 2005). This trend augmented even more since 2003 when Russia closed its borders for chicken residues, and sub-Saharan Africa became the main destination for chicken from the
economies and threaten food security as well as development. This list of dumped goods could be infinitely extended\textsuperscript{14}. If centuries ago deadly tropical diseases gave West Africa its nickname \textit{white man's grave}, today it might as well be called \textit{white man's waste bin}.

Some of this waste can be productively reused and recycled and so has a second, albeit limitedly useful life in Africa. However, there is also more problematic waste arriving on the shores of Africa – toxic waste gets exported from Europe too. Strict environmental regulations on disposal of toxic and electronic waste in industrialised nations have made disposal expensive and rendered trade of waste to less regulated countries into a business opportunity. This is especially true for electronic or e-waste, where at the core of the broken appliances are valuable raw materials – such as iron, copper, aluminium, gold and other metals; and the material for this trade in e-waste is steadily increasing (Widmer et al, 2005)\textsuperscript{15}.

Even though the disposal of hazardous waste is regulated by international law\textsuperscript{16}, these rules are all too often circumvented by declaring the waste as 'second hand goods' and, worse, justified by claims to 'bridge the digital divide' (Kuper and Hojsik, 2008). Ultimately, this dynamic is establishing a 'dumping-trade cycle' (Ndzibah, 2008), where broken mobile phones and computers end up at waste dumps. Copper and other ingredients – some of them returning to their home continent – expose poor people to toxins. The danger is most immediate for children, who work on waste dumps and try to recycle parts of the waste.

\textsuperscript{14} We have even spotted one of the famous German 'Bio Tonnen' – organic waste bins – at the colonial castle in Cape Coast.

\textsuperscript{15} “Cumulatively, about 500 million PCs reached the end of their service lives between 1994 and 2003. 500 million PCs contain approximately 2,872,000 t of plastics, 718,000 t of lead, 1363 t of cadmium and 287 t of mercury (Puckett and Smith, 2002). (...) PCs comprise only a fraction of all e waste. It is estimated that in 2005 approximately 130 million mobile phones will be retired. Similar quantities of electronic waste are expected for all kinds of portable electronic devices such as PDAs, MP3 players, computer games and peripherals (O'Connell, 2002).” (Widmer et al, 2005: 437)

Campaigners have aptly titled this 'poisoning the poor' (ibid.) or 'the digital dump' (Puckett et al., 2005).

Trade in used cars has to be understood in this context of global waste disposal. Most cars driven in sub-Saharan Africa get imported from Europe or the Americas. For a long time South Africa used to be the only country in sub-Saharan Africa that produced new cars. Since 1974 Neoplan, a German bus company, has run a production site in Ghana. However, the company does not produce its vehicles from scratch. The motor and body get built in Germany, are shipped to Ghana, and then the buses are assembled in Kumasi. Still, around 80% of the cars driven on Ghanaian roads are second-hand (Chalfin, 2008).

Sending a car can be a way for Ghanaians abroad to extend care to their families in Ghana. But many of the cars arriving in Ghana have previously been involved in accidents and are damaged. Often considered a write-off, these cars have lost their usefulness in Europe and are discarded as waste. Subsequently arriving on the shores of West Africa, the repair of such cars forms a substantive part of the Ghanaian car industry.

Considered damaged or 'totaled' in the country of exportation, second-hand imports can be repaired by Ghana’s army of highly skilled and low-paid mechanics, fitters, body workers, and sprayers who bring back to life the detritus of the West. Suame Magazine (Schildkrout 1996), located in Ghana’s second largest city of Kumasi, is renowned as the largest used car repair center in the sub-region and possibly the continent. In the capital of Accra and other cities and towns, too, spare-part sellers, automotive repair centers, and mechanics abound. Once repaired, second-hand cars are nearly equally potent markers of status as are new goods, especially if they bear the luxury marks of Benz, BMW, Audi,

17 http://www.neoplan.de/de/Faszination_NEOPLAN/Standorte/Standorte.jsp
Indeed, as John Powell in an instructive account on the history of mechanical engineers and fitters in Ghana shows, these decentralised, low-tech and small-scale car engineering enterprises are not only of importance to the “survival of the fitter”, but also to the functioning of the Ghanaian public transport system (Powell, 1995). In their “auto-biography” of a Ghanaian long-distance taxi, Jojada Verrips and Birgit Meyer observe that technological changes were employed skilfully in order to keep a car on the road. To them the story of the car “reveals a tremendously powerful will and capacity – at least on the part of ordinary people – to keep the engine working by all means, even at a time when the West tends to forget Africa as much as its old, cast-off cars” (Verrips and Meyer, 2001: 178). Thus, while their maintenance is not always straight-forward, second-hand cars (and their parts) are very much implicated in this movement of used material goods from North to South. And so is the particular car that we explore in this paper.

3.2 The small story: Dr.JESUS' journey from Winnenden to Kumasi

We first encountered the Mercedes Benz 310 at Kejetia bus station in Kumasi, where our translator Kwame Blessed Amyeibor and we conducted interviews with tro-tro drivers. The station is a knot bringing together hundreds of cars, connecting people and places from all over the region. We learned from Richard, the driver of Dr.JESUS, that the bus had been running on Ghanaian roads for five years. His father, the owner of the car, lives in Germany where he bought the car from a Ghanaian car dealer. From here the car was shipped to Tema, Ghana's commercial sea port, and after clearing customs, it was sent to Kumasi.

Dr.JESUS can transport at least 18 people plus driver and one so called 'mate' or
assistant, who is responsible for attracting and seating passengers as well as the collection of money. Thanks to his father's acquisition Richard now has a job. He and his bus transport passengers from Kejetia station to the Mankrasu area, still within the city of Kumasi. Our object of investigation is thus a means of inner-city transport. Generally, however, the journey lengths of tro-tros vary greatly. Other buses like Dr.JESUS transport people over long distances throughout Ghana and the West African region.

Many tro-tros in Ghana still display traces of their former users – company names, sometimes the old number plates or addresses. Being intrigued by this visibility of the cars' former lives, we noted a significant amount of former German ambulances among the tro-tros (in fact we had the impression there were more ambulance tro-tros than ambulances to be seen on the roads). Thus, we decided to trace an ambulance tro-tro back to Germany. The first and most important clue we could follow were the inscriptions on the side of the car showing the individual radio identification numbers. The radio number allows connecting the car to the ambulance station where it once was based. However, our tracing exercise turned out to be more difficult in practice. For example, though having established contact to the former owners of one of our most promising candidates, the Red Cross in Hockenheim, we lost this car's trace: while the Red Cross recalled the car and gave us the contact of the car dealer, to whom they sold it years ago, the car dealer claimed he sold it to someone in Eastern Europe, but was not able or willing to give us his customer's name. Fortunately, we had more success with Dr. JESUS. Its radio identification number was 7-83/2, the name under which it was also known at the Red Cross district chapter Rems-Murr in Winnenden, Germany. Thus, the next location for our research was clear – the Red Cross in Winnenden, Germany.

And indeed people in Winnenden remembered 7/83-2. For ten years, between 1991 and
2001, 7/83-2 was in use as a rescue car, transporting sick and injured persons to the hospital. Its old drivers, the paramedics, who still work at the ambulance station, remember the car well. "Robust it was", they say, “not causing much trouble”. Because 7-83/2 was a member of the older generation of cars, predominantly working on a mechanical basis, they could even repair minor problems on their own. For example, when the accelerator cable once burst the paramedics managed to get home by using their boot-lace. And 7/83-2 was weather resistant: still making its way through the snow even if the streets had not been cleared in the wintertime. However, 7/83-2 was a bit slow, equipped only with a 98-h.p.-engine. But it worked. Until 2001 when 7/83-2's life as an ambulance came to a sudden end as it was involved in an accident. The car left the road, tumbled over a barrier and rolled over several times. A big dent at the side meant a total write-off for the Red Cross – too old to be a German ambulance, but too young to die. But how then did the car end up in Kumasi?

Picture 3: Ambulance 7/83-2 after its accident in Winnenden (Picture by courtesy of DRK Winnenden)
This is when ‘Herr Jackson’ comes into play. Jackson Y. was born in Ghana and has been living and working as a car dealer in Germany for several years. 7/83-2 was by far not the only ambulance car he has brought to Ghana. The people at the German Red Cross know him well. Indeed, in his days as a car dealer (he has now more or less retired from car dealing) Jackson was an expert in ambulance cars. “These cars still have a good engine”, he explained, “but people in Germany don’t like them because they have run so many kilometres. That is why I sent them to Africa.” But recently, according to Jackson, selling the cars in Ghana got more and more difficult as people did not have the means to buy. He could not be sure to make a profit any more: “Sometimes profits were huge, you know, but sometimes I lost money too. It just became too risky.”

Generally, the trajectory of exported cars looks like this: The cars get shipped to Africa from the big ports on the North Sea. The passage takes several weeks and costs around €1,000. This is more than the car was worth on the German market at the time; used ambulances are usually emptied of their equipment and are worth around €500. In Ghana Mercedes ambulance cars get sold for around €2,000.

When 7/83-2 arrived on the shores of West Africa, at Tema commercial port near Accra, Richard was waiting there to negotiate and pay the car’s way out of customs, a process that can take weeks or months if it is successful at all. If “vehicles fail to meet the requirements of importation, or fall into a bureaucratic ‘black hole’ due to their suspicious commercial history, doctored documentation, or simply their own allure they are retained by the state and usually auctioned, a process to which government officials have privileged access” (Chalfin, 2008: 435). Customs clearance can take up to 40 administrative steps; vehicles coming into Ghana are liable for an import tax, which is dependent on the custom officer’s examination and valuation estimate of the car (ibid: 435f). Once he had freed
7/83-2 from customs, Richard drove the car the roughly 270 kilometres to Kumasi and its physical transformation into Dr.JESUS began.

The car’s interior was completely emptied out before it got shipped\textsuperscript{18}, there was no stretcher for the patients in the back anymore, nor any of the usual ambulance equipment. In Kumasi the car was brought straight to the welder, who built in four benches and cut four windows into the back and side of the car. An ambulance usually does not have windows at the back in order to value the privacy of the patients. However, Ghanaian travellers need light and a view. The windows are, furthermore, a feature to guaranty some fresh air – indispensable when travelling in tropical Ghana.

Finally, Richard christens the car Dr.JESUS. He buys stickers for the windows in the back saying Dr.JESUS and also a sign on the top front of the car reads Dr.JESUS – a process of personal appropriation\textsuperscript{19}. We ask Richard why he named the car Dr.JESUS. His answer is straight-forward: “I knew the car used to be an ambulance”, he says, “and a Doctor and Jesus are both good people, so I called the car Dr.JESUS”. For the next 8 years, and with a bit of luck until today, Dr.JESUS transports Ghanaians into central Kumasi and to the outskirts – people going to and coming from work, visiting family and friends or attending funerals. And Dr.JESUS provides Richard and his mate with a job and a salary. The car is an example of care from relatives abroad as well as of development through the diaspora. In this context its robustness is an added value, a reason why the ‘Mercedes Benz 301’ model is popular with Ghanaian tro-tro drivers and owners. It is this robustness that hints

\textsuperscript{18} The cars do not always travel empty inside. Instant Fufu, a traditional Ghanaian cassava dish, made from potatoes in Europe for the West African Diaspora, sometimes fills the boots of cars. Instant fufu from Europe, even though (or maybe because) it does not taste like the real thing, is fashionable in Ghana at the moment.

\textsuperscript{19} Date-Bah regards the mottoes on cars “to some extent as windows through which to view the life situation of these Ghanaian entrepreneurs”. In her study she interviewed 384 drivers and found that the mottoes help understand more about “occupation, aspirations, religion, thoughts, attitudes, and beliefs” of drivers (Date-Bah, 1980: 531). In this context see also Lawuyi’s study on Yoruba taxi drivers and their car slogans (Lawuyi, 1988), and for a more recent article on Ghanaian lorry inscriptions van der Geest (2009). Van der Geest’s article includes a fascinating and extensive list of inscriptions found on cars, in Twi, English and other regional languages.
3.3 The ugly story: Fluidity’s dangers

The journey of ambulance 7/83-2 from Winnenden to Kumasi is more than geographical movement. As the renaming into Dr.JESUS shows the move was accompanied by other processes. The name Dr.JESUS combines science and religion in a striking way. This hybridity extends well beyond the mere naming, as prayers, purification rituals and whole sermons have a special place in the ritual of travelling with a tro-tro (Kläger, 2009). The new owner puts religious mottoes on it appropriating the car and replacing its mere numeric individualisation as 7/83-2. At the same time, religion is (re)gaining a place in the remaking of the former ambulance car – an object which as such has great symbolic value for science’s victory over belief in modernity.

This invites us to engage with conceptions of 'alternative modernities' that aim at showing us ways out of the binary opposition between the modern 'us' and the pre- or at least not so modern 'them' (Gaonkar, 2001). Refuting the ethnocentric narrative of the one modernity 'as we know it', the concept of alternative modernities states that there is a multitude of creative re-articulations. However, such an approach would rely heavily on the meaning of the car and the changes of such meanings. What has been called 7/83-2 in Germany is now called Dr.JESUS and is simply used differently, the car is alternatively modern. What was seen as waste in Germany, has regained value. While this analysis is true, stopping there would not allow us to explore the car’s material transformation and continuities in more detail. Furthermore, understanding Dr.JESUS as an example of how

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20 Verrips and Meyer, in their account of a commercial driver’s efforts to maintain and repair his car, observe that “ingenious technological changes as well as more or less elaborate spiritual measures” we skilfully employed in order to keep the car on the road (Verrips and Meyer, 2001: 177).

21 For instance, Mbembe and Roitman understand cars as an important signifier of modernity, and in turn, broken down vehicles as a figure of Africa’s endemic crisis (Mbembe and Roitman, 1996).
alternative modernities are constructed would be a rather affirmative reading of these material realities: The car, once useless in the German city of Winnenden, now gains new importance as a means of both transport and the owner's subsistence.

The special place of religion and belief when travelling with tro-tros compelled us to pursue a different line of analysis: Travelling with tro-tros is dangerous! As Nordfjaern and Rundmo summarise:

Currently, about 85% of the fatalities due to traffic accidents occur in low-income and middle-income countries (Peden et al., 2004). When the population figures are taken into account, the frequency of traffic related fatalities is over 10 times higher in South Africa than in the United States (Peltzer and Renner, 2003). Road injuries are ranked third as a cause of mortality in Sub-Saharan Africa, after diarrhoea and malaria, respectively. Traffic related accidents are thought to be the second most common cause of injuries in this region (Nordberg, 1994). Data recorded in Ghana from 1994 to 1998 indicated that road traffic accidents were the main cause of mortality during this period (Afukaar, Antwi, and Amaah, 2003). If these trends are allowed to continue, traffic accidents are predicted to be the third leading cause of worldwide mortality by 2020 (Peden et al., 2004). (Nordfjaern and Rundmo, 2009: 91)

12,038 road traffic accidents were recorded in Ghana with 2,043 fatalities in 2007 (National Road Safety Commission, 2007: 29f). Bus travel contributes particularly to these high fatalities rates, it accounts for 21.6% of overall crash fatalities (pedestrians 43.3% and car users 11.2%, ibid: 31) 22. The Ghanaian government is aware of the traffic risks, and has

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22 The category 'bus' is used by the National Road Safety Commission, and encompasses all kinds of buses: tro-tros as well as the bigger overland buses (such as the state funded/subsidised STC, Metro Mass and various privately
stepped up public campaigns with radio/television documentaries and billboards on roads, such as “Don’t drive tired – break the drive, stay alive” and billboards announcing the national accident and fatality statistics of 2006. However, big challenges remain, as the National Road Safety Commission Annual Report 2007 outlines:

As part of its poverty reduction strategy to improve the socio economic lives of the people of Ghana, the Government has over the past decade invested considerably in the development and maintenance of roads aimed at improving the entire road transport infrastructure and services. However, one of the biggest challenges facing the nation in the road transport sub sector is the unacceptably high number of road traffic crashes and its resultant fatalities. (National Road Safety Commission, 2007: 4)

To sum up, travelling on Ghanaian roads and particularly in public minibuses is dangerous. It is in taking this seriously, that we have found it more productive to trace the dangers of this vehicle’s fluidity, rather than to analyse it in terms of alternative modernity. With Kläger (2009) we suggest that religion is a way to deal with the risks of travelling in tro-tros:

Many Ghanaians are convinced of such a twofold approach towards road dangers. Being well aware of the physical disposition and consequences of what is popularly known as ‘bad roads, bad cars, bad drivers’, they also see the need to protect themselves spiritually. (ibid, 2009:224-225)

Kläger interprets prayers, purifying ceremonies performed on cars or roads, slogans on...
cars and amulets as routine practices that “make the occupants of the vehicle feel that appropriate precautions have been taken and can therefore be described as bodily and experiential practice and are shaped by the daily and never unambiguous tasks of dwelling on the road” (ibid:230).

One just has to meditate on the transition of the ambulance car, as a potential life-saver, to the tro-tro, as a potential death-bringer, to grasp the implications of this reversal – a process which is just one example of fatal impacts the division between a global North and a global South entails. This example enables us to reflect on the concrete practices of material continuity and change that cause the risks implicit in this vehicle’s transition. Fluidity might be a clear strength of the Zimbabwe Bush Pump (Mol and DeLaet, 2002), however, in the case of Dr.JESUS, the effects of this fluidity are more ambivalent. Here, fluidity is not only a strength, it is also something threatening. Of course there are accidents on European streets too – as both the abstract need for the technology itself (an ambulance) and 7-83/2's individual history amply show. Danger is already built into the technology. But it gets amplified through its material transformation.

On the one hand, Dr.JESUS continues to be reliable. It guaranties stability. Its engine is working, every day it transports people from A to B, and it provides two people with a salary. There is no fluidity without such stability, no production of a new function without successful translation. In this regard, the transformation of the ambulance car into Dr.JESUS can be seen as a success just like the bush pump. On the other hand, continuity also shows the limits of such stability. While travelling to Ghana Dr.JESUS does not experience any rejuvenating cure, it continues to be an old car. Furthermore, 7/83-2's life as an ambulance in Germany ended abruptly because it had a severe accident. While the accident rendered the car into a write-off for the Red Cross, it remains unclear if
Ghanaian car mechanics were able to restore the car to its former security and functionality levels. As we were explained by a car mechanic, it is decisive whether the frame of a car remains intact and symmetrical. In any case, one fact remains: the car had not only suffered a severe accident when it first arrived in Ghana, but was also already old. Thus, stability and fragility can go together.

When the ambulance car is disposed off, a technology is – while discarded in Germany – reused, transformed and adapted to its new context in Ghana. The car’s journey to Ghana has therefore led to a functional transformation. The physical transition from 7/83-2 to Dr.JESUS is intertwined with a functional transition from ambulance car to means of public transport. This highlights a difference between Dr.JESUS and its second-hand brothers and sisters – the chicken rests, trash bins, electronic poisons – none of which change their function. The European chicken leftovers wreck African food production, but they do so as an underpriced food item. The electronic waste might be hazardous, but it is so as waste. Dr.JESUS goes from transporting only a sick person and her medical helpers, to transporting more than 20 people. Transforming from one public good, an ambulance in Germany, to another, a means of public transport in Ghana, brings with it changes in the materiality of the car, which in turn mean a change in risk. The dangers created by the car’s age are multiplied through factors such as bad roads or overloading. Furthermore, the small profit margins earned in this business force drivers not only to overload but also to overspeed. Often this is visualised on the back of tro-tros, where one can read slogans such as ‘time is money’.

This material transformation relies on the old structure and technology of the car, and on the introduction of new elements to the vehicle. Crucial to this material transformation is the insertion of seat benches at the back of the car. These benches are welded to the floor,
but often become loose when in use. Additionally, they do not feature seat belts which make it easier to squeeze as many people onto the seats as possible. This process attests to the fluidity of the car. But again, fluidity in this case is not only positive. As one of the welders, with whom we spoke, put it: “It is no good to transform the car. They lose stability when you modify it. They are not meant to carry that many passengers and it gets dangerous”\textsuperscript{23}. Hence, different social practices, values and norms, and this material transformation are intertwined. As 7/83-2, an ambulance that saves people, is transformed into Dr.JESUS, it becomes a risky means of travel in Africa. Fluidity is thus ambivalent, and it is neither possible to speak of a failed technology, nor of a pure success story.

4. Conclusion

What can we learn from the three stories of Dr.JESUS? We suggest they prompt us to value the fluid qualities of Dr.JESUS, which enable its use as a Ghanaian means of public transport. At the same time they show that it is not only possible, but necessary to point to the risks this global trade from North to South entails. Dr.JESUS symbolises both the robustness that makes a fluid technology beautiful and the dangers that the continued use of over-aged cars in sub-Saharan Africa means for public transport. We suggest that oppositional categories like success and failure do not capture the fluidity of certain objects. Instead, Dr.JESUS pushes us to hold the big story of global relations in tension with a small story about specific cars, their owners and journeys; and in so doing, makes their ambivalences tangible.

In our case, fluidity’s risks are a result of the displacement of unwanted goods that do not

\textsuperscript{23} Choosing even more drastic words, a German surgeon working at the time at a hospital in Kumasi called the old Mercedes buses “washing machines”. He explained to us that the high centre of gravity of these buses in addition with the accumulated weight of the passengers causes the bus to turn quickly when braking heavily (imitating the tumbling of a washing machine in the surgeons’ image). He said that these cars cause bones broken in the most extreme angles he had seen.
just disappear when they grow old and get out of use. Dr.JESUS’ geobiography explains how seemingly fixed boundaries between valuable goods and unwanted waste get blurred by the car's movement. Capturing this dynamic through the notion of 'provincialising waste' rethinks the temporal-spatial understanding of disposal and the recyclability of waste. While this recyclability highlights the ambivalence of the car's transformation, it also cautions against all-too-quick judgement:

**Not yet**

Gofment say  
I should retire this tro-tro  
But I want drive this tro-tro  
And make money small.  
So I tell them:  
not yet.

Some day  
I go die,  
Like this tro-tro here now  
Gofment condemn.  
But still  
‘trong dey for my inside,  
So I say to myself:  
not yet!

(Kyei and Schreckenbach, 1975:12)
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