

Vaccination Policies and State-Building in Post-War Angola⁵⁵

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Abstract: The article explores how public health policies may be used by the state to (re)gain its legitimacy. The author examines this through the example of the use of vaccination policies in Angola, a Southern African country torn apart by thirty years of civil war. In particular, the author looks at how the Angolan government has managed to regain control of the country, understood as both a territory and a population, and focuses on the construction of the Angolan nation and the key role of women in this tactic. Vaccination policies have been used with four non-medical purposes: to reconquer the territory, to frame the nursing workforce, to shape motherhood, and, through the use of statistics, to reinforce and integrate the Angolan health system into the global one. Women as the primary carers of children and as health workers are instrumental to the Angolan state's strategy for winning back the territory and the population.

Keywords: vaccination, Angola, state-building

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Angola, a Southern African country, was at war for several decades. After the war, the government needed to re/gain legitimacy and to re/appropriate the country⁵⁶ (Soares de Oliveira 2014), in particular through the re/construction of the health system, and not only by re/constructing infrastructure, but also by implementing consistent health policies, one reason being that this indicated that free movement had been restored in the country. Vaccination is especially illuminating on the importance

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56 I use the slash because the country was at war since independence (and even before), and the fact that it has to 'do' something *again* is questionable.

of reconstructing the health system for peace consolidation and state-building. It has been widely considered by the champions of biomedicine to be one of the most efficient ways to improve public health (Plotkin and Mortimer 1994). Largely considered a simple technical gesture, it is supposed to be able to reach large numbers of the population regardless of the social and cultural context, in the light of which its impact on the construction of the nation acquires new importance (Holmberg, Blume, Greenough 2017). Complying with its requirements is also regarded as part of the social contract (Laplante, Bruneau 2003) and a marker of a nation's unification. Moreover, immunisation 'is a direct result of a government-run public health system' (Agadjanian, Prata 2003: 2517), and a secondary benefit of the vaccination campaigns is that they make the state particularly visible.

In this article I argue that vaccination is used as a tool of population governance by the Angolan state. I also show how the specific forms of the vaccination process used by the Angolan government, both the campaign and the routine, sought to patrol and control the territory and re/conquer it by leaving the government's mark. This is all the more important in Angola where the duration and impact of the civil war undermined the authority of the government to take care of its population, especially in some parts of the country that were left in the hands of UNITA. Women are especially targeted in this process: as the primary carers of children, they are the first to come into contact with the state authorities when they arrive in these remote areas. I focused on the Huambo province, as it was meaningful in two respects. First, it was particularly hard hit by the war: infrastructure was ravaged, persons were displaced, and health and education systems were destroyed. Second, it hosted UNITA's headquarters during the war and for the government it was thus particularly important to demonstrate its presence on the territory and exercise its influence on the population.

Context

Angola is a country situated in Southern Africa on the Atlantic coast. It was embroiled in war for more than thirty years. There was a war that lasted fourteen years between the Portuguese colonisers and the Angolan nationalists that resulted in independence in 1974. The different nationalist groups could not reach an agreement on power sharing, so after independence the country descended into a war that lasted 27 years, the intensity of which varied greatly over the years and in different areas of the country. Two groups were in opposition to each other: the MPLA, (Popular Movement for the Liberation of Angola-Movimento Popular para a Libertação de Angola), and UNITA, (National Union for the Total Independence of Angola-União Nacional para a Independência Total de Angola). The country was torn apart by the war, which

divided it between government-controlled areas and UNITA-controlled areas. The fights ended in 2002, after the death of Jonas Savimbi, UNITA's leader. Infrastructure was ravaged, institutions were destroyed, huge areas of the land were mined, and the Angolan population paid a heavy toll. Angola is still struggling to get out of this post-conflict era. War led to huge movements of the population. One million persons were found dead, while 500 000 fled the country to seek refuge abroad and more than 4 million others were displaced within the country as they tried to seek better living conditions.

This war was particularly devastating and especially on the government apparatus. The administration was dysfunctional, if it existed at all. The social sector was neglected as the government did not perform its responsibilities, and government health services in particular suffered in this situation (Pavignani Colombo 2001). As an example, 65% of the medical infrastructure was destroyed during the war.⁵⁷ The country's health-related rankings were very poor: in 2002, it had the second-highest under-5 mortality rate in the world,⁵⁸ life expectancy at birth was 52 years for men and 56 for women (respectively 56 and 60 in 2008),⁵⁹ and cholera outbreaks occurred on a regular basis during the rainy season. Although Angola saw double-digit growth after the war, mainly driven by oil, which is now being challenged by the crisis in oil prices, the needs remain huge and the country, including its public health system, has had to be rebuilt from scratch.

Nevertheless, rebuilding infrastructure and more generally the health system had, for reasons that I will explore below, a bigger objective than simply providing the whole Angolan population with health care. It aimed at gaining access to the territories and showing the population that the government takes care of it in a context where the state has been largely considered 'absent' or even fighting against its own population (MSF 2002). It helped to embody the state, both in terms of materialising it through the organisation deployed in the immunisation campaigns, and in terms of integrating it into the individual body as the vaccine is injected.

Methodology

The field work was conducted over two periods of seven months (August 2007-February 2008) and two months (April-June 2008), respectively, in Huambo province, with some short stays in Luanda, the Angolan capital. Huambo is a province located 450

57 MDM, <http://www.medicosdomundo.pt/index.jsp?page=intervention&projectId=71>, last accessed: 31 May 2017.

58 UNICEF, http://www.unicef.org/infobycountry/Angola_statistics.html, last accessed: 18 July 2017.

59 Health data – Institute for Health Metrics and Evaluation, <http://www.healthdata.org/angola>, last accessed: 26 March 2019.

kilometres from Luanda. It was a province heavily affected by the war as it was home to UNITA's headquarters, and its infrastructure, including transport and public health, was hit particularly hard. It was also a highly land-mined region, making circulation difficult. There were also huge movements of the population during wartime, peaking during the 2000s, resulting in a concentration of population within and around the urban centres. This specific situation is of great importance for the topic that interests us, with regards to two issues: on the one hand, the health system was paralyzed during the war, making it a priority for reconstruction, and on the other hand, the government had interest in regaining this province, a stronghold of the UNITA.

Huambo province is divided into 11 *municípios*. Huambo-city is the most populated *município* and has the highest population density, while Tchicala-Tcholohonga *município* has one of the lowest population densities of the province. Huambo is the capital of the province, and the forms of livelihood are more diversified than in Tchicala-Tcholohonga, where the biggest part of the population relies on crop agriculture to survive. This presented great difficulties during the civil war, given that many parts of the land were considered inaccessible because of the landmines.

In Huambo province, I conducted field work in two health centres, one in Huambo, and one in Tchicala-Tcholohonga, thanks to authorisation from the DPS (Provincial Health Authority-*Direcção Provincial da Saúde*). Landmines were still a worrying issue at the time, and the above-mentioned sites were assigned based on the necessary safety requirements. I was given the opportunity to attend routine vaccinations and to follow teams in the field during vaccination campaigns or during immunization awareness events. I interviewed health workers, officials at the municipal and provincial levels, and mothers. While interviews with health staff were conducted in a formal setting, interviews with mothers were conducted in a more informal way and usually when I was doing participant observation at the health centres. At the time, researchers were unseen in Angola, particularly in the province, and I was very frequently mistaken for someone evaluating the immunisation programme for an NGO or an international agency, despite my numerous denials.

My presence in the Tchicala-Tcholohonga facility was limited by security considerations, which restricted my movement, and the time frame available for field research: I could only be there during daylight and I could not stay overnight. I also had to take a government car when observing the vaccination campaigns and could not go otherwise because the roads had not been completely demined. I was authorised to move around only under these conditions. All these restrictions meant that I conducted field work with some limitations time-wise at the Tchicala-Tcholohonga facility.

The historical contextualisation of public health in Angola

Public health in Angola: a shared responsibility

Some schemes at work in the Angolan public health system have their roots in the colonial period. Public health policies have been a preferred way of managing population and indeed the development of colonial medicine went hand in hand with the development of the colonial project (Feierman, Janzen 1992). During the 19th century, a few doctors and nurses attended to the health of the colonial settlers and to some Africans who were strategic for settlers, such as soldiers or mining companies' employees. The public health system was mainly set up in the cities and health was often left in the hands of entities other than the state.

During the 20th century, colonial medicine started to expand its scope and to take an interest in fighting tropical diseases for the greater benefit for the local population. The presence of health staff and hospitals increased but was still restricted to urban areas. Outreach in rural areas was achieved through campaigns, such as initiatives focusing on sleeping sickness. Interventions such as outreach campaigns have thus been a tool implemented since colonial times to reach remote populations and territories. At this time, maternal and infant health care were already privileged sectors of intervention, not only for colonial medicine, but also for the colonial project as a way of spreading medical advice but also moral ideas about motherhood (Hunt 1999). The modern organisation of the vaccination process is reminiscent of the organisation of the colonial health system, which made combined use of mobile teams (*missões volantes*) and permanent health centres, where vaccination against smallpox was also done. In the mid-1920s, access to health care was extended, at least geographically. The idea of *preventive* medicine, that would do more than just *cure*, emerged and became part of the active prevention of sexually transmitted and intestinal diseases and the spread of basic notions of hygiene.

Concessionary companies, especially mining companies, took charge of the health of their workers and their families and by extension implemented part of the health system in the area where they were working. This was mainly motivated by economic reasons (Shapiro 1983). For example, Diamang, the biggest employer of the colony, took care of the health of the population living in its surroundings and by the end of the colonial period covered more than half of the colony's territories (Varanda 2009). Its health services were located in Dundo. At the beginning of their contract, every local worker received a vaccination (anti-typhus and anti-measles) and was kept under observation for three weeks before being sent to the diamond mines (Dos Santos 1949). Most of the health infrastructure was implemented to meet the needs of the settlers and the workers of big enterprises, such as the mining companies or the

fazendas (big agricultural properties), and it was used to expand the health network after independence. Consequently, health facilities inherited after independence were quite well equipped, especially in the big cities.

After independence, a civil war tore the country apart and had dreadful consequences on the state of health in Angola, and it impacted not only the Angolan population but also the health infrastructure and the health system. Most of the infrastructure was destroyed and the destruction of railways, roads, and bridges made the supply of medicines extremely difficult, if not impossible in some areas. Qualified staff fled the country and sought refuge abroad. The lack of consistency in the health system in Angola also applied to the weak impact of health policies across the whole territory, especially with regard to child immunisation. During the war, the presence of international NGOs and international organisations in the field of public health was prominent. This trend increased until reaching a peak during the 1990s. The NGOs took care of the training of the workers, implemented logistics, and ran the hospitals and the health centres. Churches were also key partners in health care delivery. The Catholic Church, through its humanitarian arm Caritas, supplied medicines during the civil war. It was supported by a dedicated network of workers and infrastructure (missions, convents, etc.). Other churches such as the IECUA (Congregational Evangelical Church in Angola-Igreja Evangelica Congregacional em Angola) or the IEBA (Baptist Evangelical Church of Angola-Igreja Evangelica Baptista de Angola) helped (and still help) the population to access health services.⁶⁰ Indeed, Angola was one of the biggest receivers of international aid during the 1990s and until the end of the war.⁶¹ Consequently, local 'communities' (understood as aid beneficiaries, but also local NGO staff, the traditional authorities and the political leaders, both at the local and the national level, all in contact with this aid system) were used to deal with these actors and their practices. In some places, access to health care was only possible thanks to NGOs, churches or international agencies (Christoplos 1998). They also implemented health policies such as the vaccination campaigns. Access to public health was fractional at this time. Depending on the place, the actors in public health were different; in some cases they came from the state, in others from non-governmental and international actors. It also depended on the category of the population. People living in refugee camps or in camps for Internally Displaced Persons, people living in Luanda, and people in the cities on the coast⁶² had better access to health services than people living in the rest of the country.

60 For a more complete overview of the role of the churches in the alleviation of poverty in Angola, see Jensen, Pestana 2010.

61 For a more complete history of international aid in Angola, I refer to Tvedten (2002) and Simões and Pacheco (2008).

62 Which were relatively less hard hit by the war.

Therefore, Angolan dependence on external aid was very high at the end of the war in terms of the maintenance of infrastructure, staff management, and the supply of medicines. The withdrawal of international NGOs at the end of the war has been a major blow for the health sector (Tallio 2015).

Although it is difficult to retrace the history of vaccination processes in Angola, it was at first only available to colonisers and was then offered to the local population as a way of drawing them into health facilities and eventually under the control of the Portuguese authorities (Shapiro 1983). Vaccination campaigns also ran during the civil war, but the vaccination coverage of Ovimbundu (the major ethnic group in Huambo) was particularly limited (Agadjanian, Prata 2003). Immunisation coverage was very low in Angola in 2008, even despite the functioning of the PAV (Expanded Programme on Vaccination-Programa Alargada de Vacinação); only 29% of children between 12 and 23 months of age had been vaccinated. Moreover, in Angola, access to immunisation varied according to the children's background: 43% of children living in urban settings were immunised within their first year, but in rural settings this figure decreased to 12%. At the same time, it was estimated that the level of total immunisation was 13% for children⁶³ from poor families⁶⁴ and 55% in case of rich families. Differences between gender can be considered insignificant: 29.3% for males and 28.9% for females (IBEP 2011).⁶⁵

The health landscape of Huambo, a devastated province⁶⁶

At the end of the war, the province of Huambo had one national hospital and one provincial hospital, both of them located in the city of Huambo, and 45 health centres, 82 health posts, and 26 health units (HU) that could not be classified because they were not functioning;⁶⁷ And 49% of the health units were located in the *municípios* of Huambo and Kaala. Nevertheless, as in terms of the ratio of inhabitants to health units, the best equipped *municípios* were Tchinenje (1 HU/2632 inhabitants) and Ucuma (1 HU/2687 inhabitants), while Bailundo (1 HU/24,697 inhabitants) and Londuimbali (1 HU/18,849 inhabitants) were the worst.

63 Between 12 and 23 months.

64 Last quintile.

65 This study was published in 2011 but data were collected in 2008-2009, which makes the use of these statistics particularly relevant for the purpose of this article.

66 This section is based on the Health Map (*Mapa Sanitaria*) 2007, unless indicated otherwise. I again thank Dr Xavier Modol for having sent it to me many years after we briefly met in Luanda, after I had lost my computer, my back-up, faith in humanity, and all hope of being able to find this precious document again.

67 The numbers are extracted from the Mapa Sanitaria 2007. The classification, as explained in the Health Map, has formulated based on the answers given by the responsible person at the health unit during the survey.

Concerning the two *municípios* in which the research was conducted, the Huambo *município* had 2 hospitals, 18 health centres, and 29 health posts with 1 HU for 10,076 inhabitants, and the Tchicala-Tcholohonga *município* had 4 health centres and 8 health posts, with 1 HU for 3128 inhabitants. One hospital was about to open in the city of Tchicala-Tcholohonga but had still not begun operating by the end of the field work in 2008. The ratio of hospital beds per 1000 inhabitants was 1.35 for the province as a whole, ranging from 1.06 in Huambo to 1.68 in the *município* of Katchiungo.

As regards the private health system in Huambo, in 2007 there were 65 units registered and thus legal (this does not include drugstores and other medicine dealers), 90% of which were located in the *município* of Huambo. Other health-care facilities probably exist but were not registered. As the Health Map explains, these private health units belonged almost exclusively to religious communities (Mapa Sanitário Huambo 2007).

Human resources are also diversely distributed within the province of Huambo. Some *municípios* had no medical doctor at all (Ecunha, Longonjo, Mungo, Tchicala-Tcholohonga, and Tchinjenje), with an average of one medical doctor for 144,426 inhabitants. The best equipped, next to Huambo *município* with two hospitals, was the *município* of Katchiungo with one medical doctor for 43,510 inhabitants. At the time, Angola had one medical doctor for every 10,000 inhabitants. Huambo province was poorly equipped with medical doctors, and most of the running of the health system in Huambo was within the scope of the health technicians, who have much lower qualifications.

Likewise, the number of health technicians per inhabitants ranged from 1/105 inhabitants (Ucuma) to 1/1140 (Kaala). The ratio was 1/684 for Huambo and 1/387 for Tchicala-Tcholohonga. The coverage was 9847 inhabitants per health unit, which is much lower than the one health unit per 5000 inhabitants recommended by the National Health System Regulations (Regulamento Geral das Unidades de saúde dependentes do Ministerio da saúde). Obviously, these ratios do not convey the accessibility of these health facilities. The roads were in bad condition and some were still mined. Access was thus difficult for the population, even if, as the crow flies, the distance was short. The population was also scattered all around the *município*, but sparsely so. These two aspects could make the ratio look better than what it was in reality.

Another instructive element concerns the availability of basic and more sophisticated equipment. The Health Map shows that an important proportion of health units in different *municípios* did not have basic equipment such as scales, stethoscopes, or sphygmomanometer. For example, in the Huambo *municípios*, out of 49 health units, 20 did not have baby scales, 18 lacked adult scales, 16 a Pinard's stethoscope, 7 a stethoscope, and 6 a sphygmomanometer. In the Tchicala-Tcholohonga *município*,

out of 12 health units, one-third had no baby scales and/or no adult scales and/or no stethoscope and/or no Pinard's stethoscope and 5 had no sphygmomanometer. Regarding more sophisticated equipment, the situation was worse. For equipment as necessary as sterilisation equipment, 8 *municípios* had only one for all the health units. Only 29 microscopes, 4 X-ray machines, and 4 radio-VHS were available in the province. And 2 *municípios* did not have a car, making it difficult to transfer people to another health unit.

Analysis of the Health Map revealed that, though some health posts provided services not normally within their scope (13% of them had an emergency unit and 22% assisted during delivery), some basic services, such as sterilisation, were not provided, and only 27% of the health posts vaccinated children. Also, 65 health units had a fixed vaccination post, including 23 for the Huambo *município*. Indeed, the classification of health unit did not always correspond to the nature of the services the unit provided, and profile varied within the same category. This indicates the poor consistency of the health network.

In conclusion, a few years after the end of the war, the state of the health sector in Huambo province was still poor, both in terms of infrastructure, equipment, and qualified staff. There were huge needs and the gap between the state of the sector in urban and rural areas was considerable. Implementing vaccination could be a means to improve health in the local communities, to build a robust health system, and to strengthen the sense of belonging to a community. Mothers were instrumental in this objective, as the main caretakers of children, who are the principal targets of immunisation.

Vaccination: beyond medical objectives⁶⁸

Different ways to vaccinate people in Angola: a grasp on the territory

Children receive vaccination in two ways in Africa, including Angola: either by going to a health centre as part of a national vaccination programme or during a vaccination campaign. These two processes are equally complementary and important for the Angolan administration, one aims to inscribe the individual into the national body and the second one aims to win over the territory. To regain control of the nation both by occupying the territory and counting the population is part of a governmental strategy of controlling the population and, in the case of Huambo province, territory that was largely in the hands of UNITA during the civil war.

⁶⁸ To facilitate reading, I will from now on use the present tense.

Kruk, Freedman, Anglin, and Waldman (2010) explain how the health system affects the stability of the state, especially in post-conflict environments. It has state-buildings effect even in the case of a particularly destructive conflict. A health system that is, or that in the eyes of its users seems, equitable helps to strengthen the sense of belonging to the nation. Thus, the vaccination campaigns and their attempts to reach remote areas was a sign for the local population of the commitment of the government. In our case, it was the first contact with the Angolan government since the end of the war for several villages. Trust in the health system is not only about the capacity of health staff to produce and improve health. It can also consequently help to reinforce trust in social institutions and in the social group one belongs to (Gilson 2006).

At the health centre: health cards as a means of inscribing the individual into the national body through temporality

Most of the deliveries in Huambo's urban area are made in mother and child health centres (*centros de saúde materno-infantil*), where newborns receive their first vaccines and are given a health card (*cartão de saúde*). In rural areas, like Tchicala-Tcholohonga, most deliveries take place at home. Women only deliver at a health centre if there are complications *and* if they can find the means of transport to get there, which thus makes it more complicated to get babies on board vaccination programmes. But in both centres, routine vaccination follows similar patterns.

Early in the morning mothers are already waiting outside the vaccination facility for it to open its doors. They then queue to leave their vaccination cards (the mother's and her baby's) in a box at the entrance and go back to sit in the yard. The mothers chat among themselves, waiting to be called. In Huambo, the PAV (Extended Programme of Vaccination-Programa Alargada de Vacinação) centre is divided into two rooms, administrative procedures take place in the first one and mothers and babies gather to be vaccinated in the second one. In Tchicala, these two steps are done in one room. Nonetheless, in both centres, vaccination itself is separated from registration, if not physically like in Huambo, then at least temporally. During the time gap between these two processes, the nurse verifies the child's health condition through the vaccination card. This is a crucial step in this process: it indicates whether the child has followed the vaccination calendar and also their size and their weight, so that it is possible to detect cases of malnourishment. After having waited for a more or less long period of time, the mothers and infants are called into the room in groups of 15 to 20. They sit on a bench and prepare the body to receive the vaccine: sleeves are rolled up, trousers are taken off, etc., and vaccines are administered. Before leaving, the mothers receive some advice from the nurses: some of the vaccines will produce a fever, but the baby should not be given any medication if this happens, and it is important to

come back for the next vaccine on the date indicated on the vaccination card in order for the child to be fully protected and for follow up during the child's early years. They leave the centre after they are given back their card, on which the next appointment has been written down by the nurse.

Time as a tool to assert power and authority is particularly significant in health interventions (Fox 1999). In the mother and child health centres, the temporal dimension of this process is crucial and is twofold in nature: it occurs through the visit as such, but temporality is also transmitted by the device of the vaccination card. First, the visit is made important by the time it takes: it is not a mundane process that can be slipped in during a mother's free time. It takes the whole morning, with long waiting periods between each step of the process. The time during the visit is stretched and split into several steps. The waiting time represents a grip on the mother and the child: their time does not belong to them anymore, and instead the health staff make decisions about it – about when they come to the health centre, when they enter the different rooms, when they leave, and when they have to come back. It is a way to make them physically feel the importance of the process, by using a resource, their resource, time, in the way that suits the organisation most, and consequently to make them feel their power, as it is not possible for the mothers to accelerate it, or to escape it. It is a way of making them vulnerable.

There is another temporal dimension that takes place through the device of the vaccination card. By including reminders of the next appointments, it inscribes the mother and the baby in the linear passage of time, with a before and an after. Be it in Huambo or in rural areas, mothers do not have written evidence of the appointments: the vaccination card is the only device that cuts out time and inscribes the mother and the baby in the passage of time. The card provides a feeling of continuity, a feeling that the baby is taken care of over the long term and not only sporadically, as might be the case during war time.

The vaccination card has a third purpose. It is concrete proof that the child has been accounted for in the statistics, and is consequently a part of the national population: as one of the first, if not *the* first identity document a child receives, it indicates that they are counted in the national population. Beyond the simple and straightforward inscription into the national population, it proves that the child and the mother have adhered to a certain norm; the norm for healthy and well-cared babies (and consequently for well-behaved mothers, but I will come back to this point later), a norm established by the state: it is the state, through a nurse, that decides whether a child is well taken care of.

The vaccination campaigns: winning over the territory

Being able to reach remote areas of the country was clearly identified as a challenge by the health system assessment conducted by USAID in 2010. Vaccination campaigns are regularly organised in Angola because they are seen as an efficient way to quickly improve coverage. Different actors intervene: the routine intensification campaigns are organised by the government, which is seeking to intensify global coverage and improve statistics, and others are organised by WHO and focus on one specific disease such as measles or poliomyelitis. Private actors, mainly NGOs or oil companies through their CSR departments, also play a key role in providing resources, whether they are financial, human, or material.

During these campaigns, immunisation days are organized in every village. Advanced vaccination teams (*Equipas avançadas de vacinação*) with health staff from Tchicala-Tcholohonga are sent to villages and they stay there for one day or for the whole length of the campaign. They are divided between *equipas mobilas* (mobile teams), who walk around in order to gather children who would not independently be brought to a health post, and *postas fixas* (fixed posts), which are set up in strategic places: health centres, churches, etc. This organisational structure is supposed to reach every child, a point that is emphasised when motivating the teams before the campaign: '*Nenhuma criança pode ficar atrás*'.⁶⁹ A team performing *mobilização social* (social awareness) passes through some key places such as churches or the *soba's* house (the traditional authority) a few days in advance in order to inform about the campaign and to secure the participation of the local authorities.

The day of the campaign, early in the morning, the team of nurses meets at the health centre of Tchicala-Tcholohonga. The material needed to carry out vaccination is gathered and loaded in the car: vaccine doses along with cotton, disinfectant, security boxes, cards etc. Most of the health centres in these remote locations lack basic equipment and the team has to make sure that they bring all the material they need to proceed. They depart in a car that has been lent by the government and set off on a journey that is long and tedious, because of the poor quality of the roads, making detours to avoid roads that have not yet been demined. When they arrive at their destination, they find that some mothers, who sometimes have come from a distant location, are already waiting, with their baby on their lap or on their back, in front of the place where the vaccination will be administered. The chief of the village is also there, waiting for the team to arrive. The nurses start to prepare the room: when the health post is closed because of the health officer is absent, the

69 'No child should be left behind' – This phrase was heard many times during the field work when teams being motivated before embarking on the vaccination campaigns.

church or another central place is requisitioned. The team leaders do not see the delocalisation of the programme to a non-medical site as a problem; on the contrary, vaccination is emphasised as not just a health matter but a public one, something that concerns the whole 'community'. The political role of the vaccination campaigns in reinforcing links between a population and the government authorities has already been shown. Leonard (2011) describes how in Chad cooperating in the vaccination campaigns is supposed to please the government, especially in areas known for their rebellious stance towards the government, and the population prefers to be sure that the government will not have an excuse to interfere in their affairs. In a similar situation, in the Huambo province, the vaccination campaigns not only reinforce the authority of the government over the population, but also strengthen the bonds among the 'community' in a context where the displacement of persons has destroyed any sense of collective belonging.

The massive arrival of cars and health staff and the disruption of the village and the health centre's routine signify the government's control of the place. Public health policies derive their authority from the state's enforcement powers, which make it possible for the vaccination programmes to take place (Leonard 2011). Ferguson and Gupta (2005) insist that states develop strategies of 'verticality' and 'encompassment' in order to 'secure their legitimacy, to naturalize their authority, and to represent themselves as superior to, and encompassing of, other institutions and centers of power' (p. 982). These two tactics are at work here. On the one hand, the 'verticality' strategy described by Ferguson and Gupta indicates the willpower of surveillance on behalf of the state. This verticality strategy is very much anchored in materiality. Its effect is not restricted just to the territory but is also extended to the population through the most material part of it, the body. I would add that it is completed by the willpower of belonging. Indeed, the state intrudes on both the territory and the body of the population through the vaccination campaign and the vaccine needle. With this act, it unilaterally affirms its possession of the population.

On the other hand, the 'encompassment' strategy, the second facet of this state strategy, insists that the state provides 'care' for its population in two ways: 'care' in the sense of the vaccination and the health care brought to the people, and 'care' in the sense that the government sends health teams to the village in remote areas. This thus increases both the legitimacy and the benevolence of the state. The vaccinators are nurses from the health centre of reference, except in the case of the polio vaccination, where volunteers without previous experience in health matters can be deployed given that the polio vaccine is not technically difficult to administer (it involves drops, not injections). The other vaccines like measles, DTP, or BCG require medical skills: preparing the needle, preparing the body, injecting the vaccine. Sending qualified medical staff to the reference health centre sends the message that 'the

government cares'. The fact that these different strategies for getting hold of the population are implemented by vaccination add a magical dimension to it: indeed, vaccination can be considered a 'magic bullet', not only with regard to the clear positive impact it is supposed to have on health indicators, being often presented as such in the medical literature, but also with regard to the way it works.

Framing the nursing workforce

As was underlined by one of my informants who worked in health NGOs during the war and then at the central hospital of Huambo as the person responsible for the Statistics Department,⁷⁰ the war years in Angola established the habits of both emergency and corrective medicine, but simultaneously, the field of prevention was neglected. Vaccination was thus seen after the war as a way of educating the health workforce. As the vaccination process is very technical, compared to other medical practices, yearly trainings were organised either by the Direccção provincial da saúde or by Save the Children. It requires the nurses to prepare before the arrival of the mothers, a process that takes on specific signification. Cotton balls are prepared, which will be used to disinfect the part of the body where the vaccine is applied. Pieces of cardboard are torn up to serve as vaccination cards when these last ones are missing. Vaccines doses are taken out of the cold box and kept in a smaller one. The security box, to store used syringes, and some of the vaccines are prepared in advance. Meanwhile, the patients are waiting outside. This basic preparation process is important in several regards. First, it helps the nurses, many of them who were not properly trained during the war, to receive formal training. Second, it reinforces the identification with a professional community by performing the routine gestures of preparing the workplace.

Indeed, vaccination is a way of mobilising and strengthening the cohesion of the profession. This also helps to reinforce the feeling of belonging to the state, as the majority of the nurses I spoke with underlined. One of the nurses emphasised the importance of vaccination in order to differentiate public health from the private sector. He told me that the private sector cannot take charge of this because '[c]onditions are not met. They (people working for the private sector) only cure and are not interested in prevention, they do not do "palestras" which attack the disease politically'.⁷¹ He stressed the political dimension of preventing diseases and thus caring for the population, underlining that vaccination is a political object.

⁷⁰ Interview, Huambo, October 2007.

⁷¹ '*Condições não são encontradas. [As pessoas trabalhando para o sector privado] so curam e não são interessadas em prevenção. Não fazem palestras para atacar politicamente a doença.*' Interview, Huambo, January 2009.

Vaccination campaigns are also an opportunity to visit and control the activity of the health centres. Some are located in remote areas and this is a chance for the nurses to supervise their installations, how frequented they are, their activity, and their management by looking at the record books and chatting with the health staff. This point is especially important as most of these areas, notably in the Huambo province, were out of reach during the war. Having these campaigns and this quick supervision reinforce the state's presence through the *município* health centre staff. It is even strengthened when WHO officials or the provincial directors visit them. It creates the sense that these health centres are integrated into the local and the national health system and ultimately are part of a larger 'community'. Informal conversation takes place on these occasions, which give employees a chance to drop a word on their needs and their difficulties, hoping that they will be heard. The decision processes and hierarchy are, if not broken, disrupted for the length of the vaccination campaign.

Shaping motherhood

Just as vaccination is used to regulate the health staff, it is also used to shape motherhood. As Yuval-Davies (1993) analyses, women are considered as 'nation reproducers' at several levels: biological, cultural, and political (p. 628). They are indeed considered responsible for producing healthy citizens. This explains the strategic importance of the health of the mother and child in national policies and the centrality of vaccinations in these policies. This was well understood by one health official, who told me that the most important area in public health is the health of mothers and children: they were the most vulnerable group and, moreover, once they have been reached, the whole of society has been reached: 'One cannot find a child without a mother and a mother without a familial environment'.⁷² In this respect, vaccination plays an important role with regard to social inclusion and cohesion, as it exclusively targets mothers and children and its effects are expected to extend to the whole society.

In the Angolan context, the place of the child within public health is of special importance, it shows that the country is no longer at war, where the death of a child is seen as an unfortunate occurrence of daily life, but should now be avoided. Immunisation is considered a simple and efficient means of fighting not only preventable diseases but also the morally unjustifiable deaths of children. Indeed, when family cohesion is jeopardised by war and its consequences (forced displacement, forced separation, sending children abroad or to another part of the country to protect them...), the strengthening of the mother-child link is also a milestone marking the

72 'Não se pode encontrar uma criança sem a mãe, e uma mãe sem um meio familiar.' Interview, Huambo, February 2008.

end of the war. Furthermore, reproduction is particularly important for moving into the future (Palmer, Storeng 2016): the perspective of having children, and what it implies in terms of the transmission of values, stories, and history, helps Angola to look towards a peaceful future, both in collective/national terms and in individual terms. As Palmer and Storeng (2016) have underlined, 'producing' children after the war has nation-building purposes. Women of childbearing age are the only adult population group who are specifically targeted for vaccination, and they have been issued a dedicated vaccination card, namely, a card for women of childbearing age (*cartão da mulher em idade fértil*).

In both centres, vaccination is a collective process. Mothers are not received one by one but in groups. Going to a health centre on a specific day, waiting for an injection alongside other mothers, entering the room as a groups, the conversation among mothers as they waiting to be called: All these different steps help to create a 'community' of mothers, a sense of common belonging. They have to book their morning to make sure that their baby will be vaccinated. Everything in the process is made to remind the mother that she is linked to her child: their vaccination cards are joined, the vaccinations are done at the same time. The health staff make the mother feel guilty in front of the other mothers if her child is not vaccinated. Of course, vaccination is a process that is solely the responsibility of the mother. It is prevention, not a treatment, and one can easily skip it without anyone knowing about it. But in doing so, the mother becomes a 'subject'. This normativity is very strong and extends beyond the borders of the health centre. One nurse claimed that they are able to recognise in the streets which mothers are going to a health centre and which ones are not. The category of 'mother' within the population is emphasised in 'doing right', according to norms erected by the state.

Vaccination awareness clearly illustrates the two objectives, educational and political, of social mobilisation. As an educational tool, it plays an important role in shaping motherhood. During vaccination, recommendations are made about how mothers should take care of their children. These recommendations go beyond vaccination issues and concern breastfeeding, hygiene, and medical follow-up. They advocate breastfeeding as best for nurturing children, stress the importance of following the vaccination calendar, and offer other advice such as washing hands before cooking and after using the bathroom, boiling water, or sleeping under a mosquito net. Immunisation leads to a wider control over child-rearing. The recommendations aim to explain to the mother the 'right' way of taking care of a child, they are highly normative and representative of WHO (World Health Organisation) directives regarding health care, which have been endorsed by the Angolan government as a way of showing their integration into the international scene. Having credible statistics that can be used at the national and international levels is another way.

The importance of the circulation of numbers

The importance of numbers and statistics in aid policies has been widely documented. Considered the most objective way to measure accomplishments, they are both proof of efficiency and a means of control (Porter 1995). Vaccination, supposedly one of the easiest health processes to measure because of its dichotomous nature – a vaccine is either administered or not, unlike other medical acts, whose measure of success can be more complicate to define – is taken as a device for measuring the efficiency and extent of coverage of the health system and for controlling health staff. It tells a specific story on the country and the government, its health system, and the country's place in the international scene (Cabane Tantchou 2016).

Using statistics to strengthen government at the national level...

Statistics, because of their importance for prevision and control, have been crucial for health system management and planification (AbouZahr, Cleland, Coullare, Macfarlane, Notzon, Setel, Szreter 2007). In both health centres, vaccination statistics are the ones pinned on the wall for the nurses, for the purpose of monitoring whether their work is effective. Vaccination is here a privileged means of exercising control, or so think the nurses. Indeed, because of the ease with which they are measured, vaccination programmes are often used for purposes related to population management.

Indeed, every vaccination, whether administered by routine or in a campaign, is registered and a nurse is specifically allocated to this task. The nurse writes down the vaccine that is to be administered and at the end of the day compiles the records in order to obtain statistics by population categories (children, pregnant women, women of childbearing age) and by vaccine, which will be communicated to the upper level. They are sent monthly from the health centre to the Municipal Health Authority (Direcção Municipal da Saúde), then to the Province Health Authority and to Save the Children, and then to the Ministry of Health in order to collate data for every administrative unit but also temporally. Through the vaccination campaign, the population is re-evaluated, as it is considered a rule that the age bracket that should be reached constitutes 4.3% of the population. For example, statistics from the immunisation campaigns of 2005 were used for population estimates when constructing the Health Map (Mapa Sanitário Huambo 2007: 17). At the time, the last Angolan census dated from before independence, so population statistics derived from vaccination campaigns could be used for projections. There is no need to emphasise the importance of census and population numbers in the construction of the state, as it has already been brilliantly analysed by Scott (1998) or Porter (1995). In this case, they can be used for allocating state resources, but also for developing

the resources of private agents. Statistics are far from a neutral resource of use to the state apparatus, and on the contrary are highly political and can be employed to favour or punish those who have not performed well enough.

Their importance is genuine, and not only within the governmental system but also for international organisations. In the Country Cooperation Strategy that are released yearly, the poor health status of the country is demonstrated by referring to the degree of immunisation coverage and the numerous outbreaks of epidemic diseases that have occurred in Angola during the last decade. To combat this situation, it is considered a health priority to 'prevent and control communicable diseases', which is given as Strategic Objective No. 1 for 2009-2013. It was already a vital topic for 2002-2007, and WHO supported the efforts of the MINSA (Ministry of Health), including strengthening the PAV. Vaccination was also a recurring theme in the Angolan newspapers. *Jornal de Angola*, the daily governmental newspaper, regularly published reports on the campaigns organised and emphasised their great success.⁷³

International agencies use immunisation statistics to prove that the Angolan health system is fully operational. Immunisation programmes, as Agadjanian (2003) noted, is the direct result of a government-run public health system. Some vaccination campaigns are decided according to coverage statistics. Thus, the data do not only indicate a medical reality but also provide information on whether the Angolan government is playing its role. During the war, population or health statistics were inexistent, or, at best, partial and produced by international agencies that had projects in specific areas of the country. Having current credible and national statistics (without elaborating more on their veracity) reports on the capacity of the state to penetrate the country, to reach its population, and to hire competent staff. Immunisation coverage in that matter is of specific importance and is used for different purposes by both international and national agencies. For example, WHO uses it to evaluate health coverage and UNICEF uses it to illustrate the state of child health and to determine how well the government is considering children's needs. Likewise, the Health Map measures the efficiency of the health system based on the equality of access to vaccines used and the number of vaccinated children. Discrepancies between provinces that are too great (and some reports showed differences between provinces where some have immunisation coverage of 18% and others more than 1000%⁷⁴ during wartime) undermine the government's credibility as being able to fulfil its role.

73 'Vaccination campaigns go way beyond expectations in Katchiungo' (*Campanhas de vacinação ultrapassa expectativas em Katchiungo*), 31 July 2008, and 'Vaccination campaigns against polio go way beyond objectives' (*Campanhas de vacinação contra a polio ultrapassa metas*), 25 June 2008 are a few examples of articles title advertising the work done by the government.

74 One thousand per cent. This example illustrates particularly clearly how unrealistic statistics reflect the government's poor capacity to control its territory and its population.

Moreover, data circulation through the health system disciplines governmental agencies. It creates links between health, political actors, and decision-making levels through their physical travel (because of the absence of computers, at least at the lowest levels): everything is written down on sheets of paper and has to be physically transported from one place to another. This structures and unites the system by making it necessary for people to meet, as the administration of vaccines constitutes a motive for travelling, meeting, and exchanging for diverse objectives.

...and at the international level

White has already noted that foreign and international health structures can take public health measures and 'act over and above the boundaries' (White 2011: 452). Likewise, in Angola, the decision to organise vaccination campaigns is made in Luanda but sometimes also outside the country. The need to improve immunisation data can lead to the launch of new vaccination campaigns, which are decided either in Luanda, or in Geneva, at the WHO's headquarters, or in New York, at the headquarters of UNICEF. The decentralisation of health-policy initiatives does not mean the dispossession of sovereignty for the government, but on the contrary constitutes its reinforcement, as it means that the government is recognised and integrated among sovereign states. Improving health statistics helps Angola to establish its place in the international scene, showing that the war is now over and that vaccination coverage has returned to a level that is considered 'normal' with respect to the country's socio-economic characteristics. It shows that the government is able to take action quickly and efficiently. The example of the poliomyelitis cases discovered in 2005 is meaningful in this respect. The country was supposed to be polio-free since 2001, but the discovery of some cases led to immediate action. This has reinforced the government's credibility, both in terms on the one hand of its capacity to take action and implement it effectively, and on the other hand its will to take care of its population.

For these reasons as well, campaigns take place at regular dates: this demonstrates that peace has been established and any zone can be reached. Nevertheless, there is a discrepancy between the campaign slogan – 'Health for all, vaccination for everyone'⁷⁵ – and the reality of the campaigns, as some zones are still not covered because of the difficulty accessing or the costs it would involve in the light of the small number of children to immunise and supposedly living there. Nevertheless, the broad publicity surrounding these campaigns has sought to reinforce the image of a

75 'Saúde para todos, vacinação para todo o mundo.' The slogan of the vaccination campaigns at the time of the field work.

'caring' government, a government that has managed to regain control of its territory and its population.

Conclusion

In this article, I discussed how vaccination policies have helped the Angola government to establish control over the country in the post-war years. The health system of the Huambo province, as the *Mapa Sanitaria* study showed, was hit hard by the war, especially its infrastructure. The implementation of vaccination policies has had several consequences and were aimed not only at improving health indicators but also at re-establishing control over the population. Women occupied an instrumental place in this tactic, especially as they are the primary carers of children and vaccination is mainly directed, in Angola at least, at children. Through a strategy of trying to control them, the government has sought to establish control over the population of Angola as a whole. Vaccination has also had other side effects, such as reinforcing the Angolan health system and establishing its place in the international community.

Nevertheless, almost a decade after the field work, the international community feels that much progress still needs to be made, especially with regard to 'the poor maintenance of health centers, (...), limited human resources and health technicians, in quality and in quantity, and poor distribution in rural and peri-rural areas' (Country Cooperation Strategy 2017). The territorial coverage of health services and the health system through vaccination policies has not improved since 2008. The vaccination process was eventually more successful at creating bonds with remote villages, which is undoubtedly of primary importance in a post-war context, than it was at improving immunisation coverage.

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