

Coordination in Crisis: The Practice of Medical Humanitarian Emergency



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I hereby confirm that this work is my own, except where otherwise specified.

Abstract

This thesis in anthropology investigates how emergency is socially constituted as a named and actionable entity. Specifically, it asks how human values and techno-scientific practices contribute to the constitution of emergency in the context of medical humanitarian intervention. The study considers emergency from an ethnographic perspective, as a group of international medical humanitarian practitioners from the aid group *Médecins San Frontières* (MSF) come to understand and respond to the 2013 outbreak of armed conflict in South Sudan and the potential for mass starvation among certain groups within that country. Through the method of participant observation, it examines how emergency is understood or constituted at three different conceptual levels: at the level of the individual clinical encounter, the level of population statistics, and the level of political representations of crisis. By extension, it inquires as to how professional formation and moral categories determine appropriate response. The study reveals how values, ethics and conceptions of “the good” are embodied in—yet imperfectly translated through—numerical measures and institutional structures. This reveals a key paradox of medical humanitarianism: that rational, technocratic institutions simultaneously enable and debilitate the goals and means of humanitarian action. This study is based on 11 months of fieldwork (Oct 2013-Sept 2014) with the Amsterdam operational section of MSF. The fieldwork was multi-sited; it included participant observation of MSF activities in Amsterdam (The Netherlands), Juba, Leer and Bentiu (South Sudan).

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Have you seen a famine? -No. We have seen starving people. That is what we have witnessed.

We make assumptions about the rest.

Rony Brauman,
ex-President of Médecins Sans Frontières
(personal interview, Montparnasse, 26 May 2010)

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Chapter One: The Question

This thesis investigates how emergency is socially constituted as a named and actionable entity. Specifically, it inquires how human values and techno-scientific practices contribute to its composition in the context of medical humanitarian intervention. It examines the techniques, practices, morals and interactions that are instrumental to the definition, declaration and response to medical humanitarian emergency. In brief, it asks how emergency comes to be known as such.

I follow emergency in action as a group of international medical humanitarian practitioners from the aid group *Médecins San Frontières* (MSF) come to understand and respond to the 2013 outbreak of armed conflict in South Sudan and the emergent potential for mass starvation among certain groups within that country. I scrutinize how the situation comes to be conceptualized, how numbers are used to give verifiable dimensions to crisis, and how professional formation and moral categories delineate appropriate response.

The work examines how contemporary emergency relief workers—specifically, biomedical practitioners and allied professionals—make decisions in situations of mass crisis such as those characterized by armed conflict and natural disaster. It inquires how rational, professionalized individuals and institutions react when confronted with (or indeed, seek out, as a professional practice) situations of overwhelming human suffering and need. To do so, the thesis structures the investigation in terms of three bodies—the body politic, the body of the population and the individual body—and inquires how emergency is conceptualized and practiced upon each body. These three bodies roughly correspond with how emergency can be rendered at interdependent levels of aid organizational structure—at the distant level of the headquarters office, where

emergency must be intellectualized and contextualized as part of broader political and institutional realities; at the level of field-based public health practitioners, who work to understand the population dynamics of crisis; and at the level of hospital-based clinicians, who attend to individual patient bodies. With a focus on these interrelated ways of knowing, valuing and decision-making, this research attempts to contribute to broader and long-standing anthropological inquiries into rationality, irrationality, certainty and the nature of scientific knowledge.

In pursuing these goals I bring together the anthropologies of humanitarianism, care and bureaucracy. Elements from each of these fields—perspectives and practices of humanitarian morality, medical care, and bureaucratic administration—mediate practitioners’ knowledge of and response to medical humanitarian emergency. To examine the questions I adopt an epistemological and methodological stance associated with Science and Technology Studies (STS), in particular, work associated with Annemarie Mol (2002; 2008; Heuts and Mol 2013) and Bruno Latour (1987; 1993; 2004; Latour and Woolgar 1986 [1979]; Latour and Venn 2002). The STS perspective allows me to link otherwise disparate subjects together as rationalist knowledge practices.

Throughout the thesis, I also refer to a recent essay by Joel Robbins (2013). Robbins is a proponent for an emerging field he characterizes as an “anthropology of the good”—a sustained anthropological focus on how people chart coherent paths to action in a morally ambiguous world (Robbins 2013:457-459). Robbins posits that a major theoretical turn is underway in anthropology; more precisely, he posits a turn of a global zeitgeist (of which anthropology is simultaneously constitutive and derivative). This global turn is a shift from—though not a rejection of—concerns with human universality and the suffering of strangers, towards questions of valuation: considerations of what is good and desirable within individual, global and

universalist social and historical frameworks (Robbins 2013:447-448, 457). Perspectives from the anthropology of the good are relevant to the thesis because how practitioners conceive of and define emergency is in large part influenced by their desire to formulate a meaningful and appropriate response to the world, as they perceive it. The definition and practice of emergency is a way of constructing, or moving toward, the good. In their own way, anthropologies of humanitarianism, care and bureaucracy each explore attempts to formulate the good. Taken together they can help reflect on the contemporary moral and philosophical foundations that support emergency as a social category and sphere of action. They provide at least a partial answer to the question of how emergency is made known in the context of medical humanitarianism.

This study began with an ambition to be an anthropological participant observer of humanitarian crisis in action: to be present at a place and time when practitioners of emergency come to identify, understand and address emergency. A carefully designed research protocol enabled me to follow an aid institution's response to a complex humanitarian emergency as it evolved, in real time over a period of months. As I developed the methods for the study, I had in mind the classic program outlined by Latour in *Science in Action* (1987) in which the anthropologist observes scientists as they come to identify, understand and address problems within the context of a laboratory, scientific theory or experimental technology. In drawing explicitly from a classic framework—the research method proposed by *Science in Action*—the study participants are viewed through a certain lens: as morally-motivated practitioners of Euro-American rationalism.

Past anthropological studies of humanitarian action and human emergencies tend to cluster around one or more core themes that include power, transnationalism, ethics and the universality of human suffering (Ticktin 2014:274-275, 283-284). This thesis begins from a slightly different

perspective: one of professionals trying to grasp the nature of reality through an empirical framework. It focuses on how rationalist tools and practices of medical humanitarian emergency—biomedicine, public health, managerialism and logistics—are used to formulate response to crisis. In this way the thesis asserts that (in addition to analyses of, for example, aid workers as moral actors and emissaries of transnational power) medical humanitarian practitioners should also be viewed as representatives of the sciences: technical specialists educated in and equipped with empiricist techniques and materials, in pursuit of Euro-American medico-ethical goals largely rooted in the Enlightenment. From this perspective the views and methods of Science and Technology Studies—that examine how technological devices and practices shape and are shaped by human interaction—form a framework for insight on the nature and character of medical humanitarian knowledge. I document attempts by biomedical and allied practitioners to name, describe and negotiate a perceived set of circumstances (mass starvation among the Nuer people) while acting as agents of and technical experts in a Euro-American tradition of morally motivated rational intervention. The thesis relates an encounter between Euro-American rationalism and the ethnographic Other; however in this case the Other is uncertainty: a dangerous unknown, socially characterized as “emergency” (Douglas 2002 [1966]:xi). This characterization is explored later in this chapter.

While knowledge and decision-making in emergency are the primary subjects of the research, human nutrition, food scarcity and mass starvation are the context. If crisis is by nature unpredictable, then food shortage and starvation are an exception to this rule. In certain parts of the world (Africa’s Sahel, in particular), food shortage and widespread hunger—along with the institutional response to it—are cyclical and predictable, annual occurrences known months in advance. The institutional practice of therapeutic nutrition is an overtly medico-scientific specialty. Informed by a vast body of scientific research, subject to precise measures and regional variation, certain aspects require administration by experienced clinicians. Yet at the same time,

many routine functions (measurement, recording and feeding) can be carried out on a large scale by minimally trained individuals. Practitioners consider appropriately managed therapeutic nutrition potentially one of the most impactful of medical humanitarian interventions (Bradol 2009:205-206; Briend 2009:191, 195-196). In crisis, a measuring tape and an expert eye are all that is required for diagnosis; grain, sugar and oil can be the start of treatment. With scientific and technical advances the practice has been streamlined and refined over the years so that some aspects now resemble an industrial process.

This combination of expert practice, reliable measures, minimal technology, factory-style processing and immediate, measurable impact makes nutritional intervention a common feature of many relief programs. The same factors make it good for anthropological research: the expert practice of humanitarian nutrition is seasonal, cyclical and predictable, based in routine and outwardly materialist—seemingly basic, yet structurally complex.

Nowhere is this apparent simplicity so deceptive as in the language of hunger. Aid workers—like practitioners in any professionalized, technical field—employ a vast vocabulary of acronyms and specialist terms. Technical terminology is everywhere. Discussions about starvation are no exception. While the range of terminology can be confusing to the outsider, and the language of hunger remains contested (Conway 2013:65), each specific term carries implications; apparently similar words carry subtle differences in meaning. *Food security*, *food insecurity* and *food crisis* refer to the relative accessibility or inaccessibility of adequate basic food supply; as such they reference markets, livelihoods and consumption patterns (Conway 2012:65-66). Food crisis can bleed into *nutritional crisis* and *nutritional emergency*—which refer to biology, and the rapid or severe deterioration of population-level *nutritional status* or *mortality*. These terms are population-level classifications, aggregates of individual instances of undernutrition or death, as documented by practitioners in the course of public health surveillance. *Public health* itself is

the study and prevention of morbidity and mortality at the level of collectives; its foundational scientific practice is *epidemiology*, the (statistical) study of causes, effects and patterns of health and illness within populations. The definition of *population* itself is not as straightforward as it would seem; in the broadest possible sense a population is composed of relational beings brought together under an analytical lens on the basis of perceived shared characteristics (Krieger 2012:634, 660). In the context of medical humanitarian emergency, these include temporal and geographical co-location, but also presentation—in the rush of emergency, those who do not make themselves amenable to counting are not counted. The uncounted might include people in hiding, or at work in the fields or too young, too old or too weak to present to the hospital.

At the individual level, *undernutrition* is inadequate dietary intake, whether the cause is environmental, social or biological. In the context of medical humanitarianism *malnutrition* and *undernutrition* are used largely synonymously, though strictly speaking *malnutrition* also includes over-nutrition (Shetty 2003:18). Each of these population and individual-level terms can also be categorized in terms of severity (*mild*, *moderate* or *severe*) and temporal character: *chronic* (long-term) or *acute* (sudden onset). Thus locales can suffer from *chronic* or *acute food insecurity*, and individuals can suffer *moderate chronic* or *moderate acute undernutrition*, among other possibilities along the spectrum of undernourishment. Certain distinct manifestations of undernutrition are also recognized, the most notable being *Kwashiorkor*, an enigmatic malnutrition distinguished by oedema (Jackson 1986:43; Golden 1998:433-436; Smith et al. 2013:548). All of these entities may be characterized as the realm of *therapeutic nutrition* or, a less commonly heard term, *medical malnutrition*; both are the medicalized identification and response to severe undernutrition that frames undernutrition as a pathology to be managed through clinical intervention. By and large, this is the MSF approach. Its primary focus is on treatment of individual pathophysiology, as opposed to addressing aetiology in the community, polity, economy or environment.

Therapeutic nutrition, and these pathologies, are explained in greater detail in Chapter Four, in the section entitled Emergency Nutrition.

Some of these professional terms are evocative (*mortality* is a blunt summation); but most are deliberately antiseptic. *Severe acute undernutrition* implies eminent death from starvation and infection, yet has a character of detached technical precision. Hunger is an emotive topic; nutritional extremes—both undernutrition and over-nutrition—can provoke strong sentiments that slide easily into moralizing (Yates-Doerr: 2013: 50-51, 65-67). Technical specialists may use linguistic precision as a means to sidestep the implied bias (MacKenzie 1993:25). Moralistic narratives can be problematic if one hopes to examine starvation to practical ends: to define or treat its effects. Thus professionals employ technical terms to deal with different characters, grades and nuances of starvation.

All this vocabulary may be variously defined, contested or misunderstood, but the word *famine* is perhaps most problematic both in definition and as a research focus. In the popular mind, famine might equate with any form of mass starvation. The word has a Malthusian connotation and conveys images of skeletal victims, mass mortality and displacement. This emotional cargo carries over into professional literature and practice, where the word is a trigger for action and political accusation (de Waal 2005 [1989]:9-32). There is limited indication of a consensual definition of famine in professional nutritional circles. Even this is rarely invoked. At present, the Integrated Food Security Phase Classification (IPC; [<http://www.ipcinfo.org/>]) comes closest to a consensual technical definition; its food security scales label famine as the final, catastrophic phase of a lengthy period of mass starvation and mortality (IPC Global Partners 2012:29). This definition is imprecise and used only in extremity. In advance of famine,

aid practitioners use the terms food crisis, nutritional crisis, and nutritional emergency (in rough order of perceived severity).

Because of the term's problematic, multifaceted connotations, this thesis avoids, where possible, use of the word famine. I also try to minimize use of other professional terms like food crisis and nutritional emergency, except in the context of citation, definition or dialogue; these words may come from the mouths of my informants, but I try to avoid them when writing in my own words. Instead, to encapsulate this broad range of technical definitions, I often refer to hunger, acute starvation and mass starvation. At different points I also use ponderous expressions that I have invented, like hunger-as-emergency and starvation-knowledge. These cumbersome terms are emotive, imprecise (hunger is not the same as starvation) and deliberately so. For three reasons, I use clumsy terms as an intentional contrast to medico-technical vocabulary. First, to remove myself from the smooth, technocratic language of professional starvation-response—to which, as a former aid worker, I am habituated after ten years in the field. While there are medical definitions for hunger and starvation, these particular words are less used in medical humanitarian circles. Thus they help dissociate from ingrained patterns of thought, and make one aware of assumptions that may be inherent in established vocabulary. Second, the terms call attention to the social process of translation: the manner in which certain words transform the social and physiological experience of starvation to or from a subject for technical expertise. Third, in contrast to much of the medico-technical vocabulary, these words simultaneously highlight both the physiological and political processes at play in any situation of acute hunger: one can starve or be starved (de Waal 1997:9).

Origin of the Question

My interest in this topic came from a long-standing concern that lingered from my previous career. For a decade I was an emergency relief professional. For most of that time I was a field coordinator with MSF, the same group described in this thesis. In my years with the organization, I was often confronted with the dilemma of what made emergency in a context of grinding poverty or violent conflict, where trauma and limitless need are the norm. In these situations I struggled to comprehend how emergency was different from everyday life. I also struggled to formulate a picture of emergent crisis when confronted by lack of information, confused or conflicting reports and outright lies. It was difficult to mount a response when uncertain of the very nature of the crisis in question. Memories of some of these dilemmas haunted me for years. Thus the subject of how aid workers perceive crisis and enact response became the focus of my thesis.

This same question—how medical humanitarian emergency is known and constituted in practice—also emerges from the literature. How people and societies perceive and react to crisis is a long-standing anthropological concern—one that, in many ways, prefigures the discipline. Indeed, crisis may be central to anthropological epistemology. As a discipline, anthropology developed in a period of immense social change. Its emergence as a scholarly enterprise coincided with—and was impelled by—the widespread social disruption that accompanied European colonialism (Gough 1968:12-13; Lewis 1973:582). A focus on misfortune and community upheaval was implicit in structural functionalism and its antecedents, which placed emphasis on stability and continuity in social institutions as a bulwark against the dangerous caprice of both nature and human beings (Torry:1979:521). Durkheim's school was deeply mistrustful of the notion of crisis or revolution as precipitators of social change (Giddens 1978:17). Yet ethnographers were acutely aware that colonial administration wrought social

upheaval (Hutchinson 1996:30). Indeed, much early 20th century ethnography focused—if reactively—on the theme of irrevocable social change. Many thought that a majority of traditional societies were destined for extinction—deliberate or accidental—through the combination of colonial administration, missionary zeal and the relentless drive of modernity. So the “salvage ethnography” of Franz Boas deliberately aimed to gather, document and interpret the material objects and oral histories of endangered peoples before they were lost to time (Marcus and Fischer, 1999:27).

Mid-20th Century structuralist and symbolist anthropologists focused on social coherence in the face of internal or external danger. As their double-barrelled titles suggest, Bronisław Malinowski’s, *Crime and Custom* (1926), Victor Turner’s, *Schism and Continuity* (1972 [1957]) and Mary Douglas’, *Purity and Danger* (2002 [1966]) juxtaposed order and disorder, external danger and internal logic, to account for how groups maintained continuity when confronted by moral, economic or political threats. In these works equilibrium, not crisis, is the emphasis—yet they acknowledge that crisis gives special insight on social roles (Torry 1979:521-522; Oliver-Smith and Hoffman 2002:4-5). In the 1950s the Manchester School was probably the first to actively investigate crisis and conflict, named as such, as manifest through economic migration and industrialization. Turner’s *Schism* identified with this school (Werbner 1984:157). However, despite this widespread interest in social crisis, during this period only Anthony Wallace (1956) carried out research specifically focused on existential crisis: disaster as a category of experience (Torry 1979:517; Oliver-Smith and Hoffman 2002:5).

To frame emergency as a subject for anthropology, this longstanding anthropological focus on order and disorder—and in particular the work of Mary Douglas—centrally informs this thesis. To this day Douglas has an important influence on how anthropologists view crisis,

through her focus on how individuals and institutions use systems of social classification to map and control their environment. She notes how the most banal of internal and external occurrences can often be characterized as offences against social classifications, hence offences against the moral order of the universe. Social classifications—such as cleanliness, taboo, insider, outsider—can play out along a relational model, wherein the human body becomes a metaphor (a “natural symbol”) for the community at large—the *body politic* (2002:44, 142, 150; see also Scheper-Hughes and Lock 1987:7-8, 18-19, 23-24).

A definition of emergency flows naturally from her work on social perceptions of danger (Douglas 1986 and 2002). In a manner similar to how taboo demarcates danger, emergency too is a collective invocation that serves an instrumental purpose. While it may refer to or be made in response to external events, emergency is a social call to action (Douglas 2002:xii-xiii, 48-50). Declarations of emergency are moral assertions that insist on the suspension of everyday norms. In this way emergency gives power to those who declare it (Douglas 2002:117; Calhoun 2004:374-375).

When framed in this manner, crisis, emergency and disaster can be seen to have a dramaturgic, narrative or ritual character. Emergency interrupts the everyday, to instate a liminal period of disaster and response—a time of high drama and elevated moral stakes—then transitions (abruptly or gradually) into a post-emergency stage (Rosenburg 1989:1-2; Oliver-Smith and Hoffman 1999:7-10; Douglas 2002:119; Calhoun 2004:387-388). When viewed through the lens of ritual, far from being a social aberration, states of emergency may be central to group constitution, welfare or identity. As Douglas affirms, the existence of crisis is also indicative of structure—in order for crisis to be defined as such, it must be defined in opposition to something (Douglas 2002:43-45). Groups cohere around and establish themselves as a result

of and in relation to perceptions of danger (Douglas 2002:152). Group identities are shaped by emergency because it brings moral clarity to the texture of the everyday (Redfield 2013:32).

If dirt is “matter out of place” (Douglas 2002:44), I propose that crisis is lived experience out of place. Like dirt, emergency is a residual classification—it is what is left outside the order of things after we define normalcy. The same steps that we take to delimit and control dirt—the same exercises of classification and purification (Douglas 2002:43-48)—are at play in our response to emergency. Just as pollution is likely to occur where lines of social hierarchy and propriety are strongly defined (Douglas 2002:140), emergency, too, happens where there is a rupture in normative social experience. Millions might live on the “verge of crisis”—in situations of chronic poverty, illness and uncertainty, but—because these experiences are quotidian—they lack the social clarity of emergency (Redfield 2010:173-179). Where misery is ordinary, pervasive and endured it is hard to muster moral outrage or imagine alternative realities. It takes a vital moral-biological threat to invoke emergency; how that threat is defined in practice is the preoccupation of this thesis.

In popular usage the terms crisis, emergency and disaster are often taken synonymously. They are not precise synonyms.¹ But all these terms share a crucial aspect: they are uncertain turning points in time. Their occurrence is a break with the everyday; a dangerous disruption that, even if effectively resolved, means life will never quite be the same again.

¹ “Crisis”—from the Greek, *krisis*, “decision” or turning point—indicates a dangerous or intense situation that calls for quick, effective decision-making (see Redfield 2005:335); “disaster” is a sudden, unanticipated accident or catastrophe accompanied by great loss of life or resources (ODE 2010); “emergency” (from the Latin *emergere*, to arise, or bring to light [OED 2010]) conveys the sense of being emergent—and therefore dangerous (Douglas 2002:48-50, 124, 152)—thus emergency requires unexpected, immediate, decisive action to avert dire consequences. This study focuses on emergency which encapsulates the sense of an ambiguous, dangerous situation as it comes to be known, delineated and combated.

Thus characterized—with danger, emergence, transition, uncertainty and liminality as definitive characteristics—emergency takes on the narrative character of a rite of passage. This is not to argue that emergency is a rite of passage, but that emergency follows the rite's distinct categories of separation, transition and incorporation (van Gennep 2013 [1909]:11). Participants in emergency are temporarily separated from the normative flow of global affairs (Calhoun 2004:374); they may attribute it the character of an initiation. The time before the danger may be characterized as a period of relative innocence from which people are forever severed; the state of emergency itself is a liminal (even sacred) space (Redfield 2013:163-167); response to emergency delineates and addresses a deadly threat, then reincorporates the people, place and events into the mainstream of political life (van Gennep 2013:10-12). The dramaturgic character of public health emergencies has long been recognized (Rosenburg 1989:2).

Emergency may follow the narrative pattern of ritual, but this does not mean it is contrived. It is enacted in response to a certain constellation of events in the world. It is a patterned social reaction to what simultaneously represents a moral, biological and psychological threat; a threat to integrity of self and community. External events may threaten biological existence, but they also threaten peace of mind, conception of self and group. While relatively new as a social concept (Calhoun 2004:380-384), emergency shares essential characteristics with more classic anthropological concerns around knowledge, belief and symbolic systems (Good 1994:14-21, 29-36; Douglas 2002:43-45) Thus the central thesis question: if emergency is an abstraction—a state of mind—how is it made manifestly real?

Not all emergencies are made apparent in the same way. The start of some emergencies is obvious: in an earthquake the ground moves and buildings collapse. More commonly, what comes to be called emergency commences imperceptibly. This study is about how the imperceptible is made perceptible. Epidemic or famine spread invisibly, except perhaps for their

very late stages. Even then it is difficult to know the severity and extent of their effect. Individual sufferers know that they and those around them suffer—but may not know, and will likely be little concerned with—the geospatial reach of that suffering. It takes a particular interest and particular techniques to frame this as an issue and elicit knowledge to that end. Institutional values and techniques define crisis (Douglas 2002:122). How we frame emergency has important implications for how we respond to it.

Calhoun points out that the rise of emergency parallels the rise of rationalist institutions and managerialism (Calhoun 2004:374). Perhaps the central defining feature of contemporary emergency is its association with managerialism; wherever on the globe it happens, emergency is framed as a disequilibrium that can be managed through the application of rational, technocratic governance (Calhoun 2004:374-375). Emergency may be a moral category, but it is evidenced empirically and certified by institutions. This corporate, interventionist framework is a product of a worldview and global governance system that views nature and society as amenable to informed, well-intentioned intervention (Douglas 1986:93-96; Scott 1998:3-4; Calhoun 2004:390-391).

This tendency to value morally-motivated rational interventionism is not confined to people in positions of power. Urgent concern for others' suffering—and questions of how to act collectively to ameliorate that suffering—are ubiquitous in contemporary discourse, as will be examined in greater detail later in this chapter. Anthropology is not immune to these concerns; the foci of anthropological enquiry have moved along with broader social mores (Robbins 2013:448). This is illustrated in the changing manner in which anthropologists have approached mass starvation and humanitarianism as topics of enquiry.

Anthropologies of Starvation

While first-hand ethnographies of mass starvation are few in number, the earliest contemporary account is perhaps the most remarkable—written, not by an observer, but by a victim. Sociologist Pitrim Sorokin was starving when he wrote the drafts for *Hunger as a Factor in Human Affairs* (1975) during the 1919-1922 famine that followed the Russian Revolution (Sorokin 1975:xxiii-xxiv).² Both a personal and sociological reflection on mass hunger, his account is lucid and unique. Social anthropologists had nothing to compare to Sorokin's first-hand experience. Yet in the first half of the 20th century, food scarcity, hunger and starvation (or the potential for it) were a common feature of life in many places ethnographers worked. Thus early anthropological monographs introduced—and seemed to take largely as given—the indigenous concept of “hunger months” (Richards 1939:35). Subsistence farming and transhumance meant the possibility of blight or starvation always lurked in the background. This was a reality acknowledged in ethnographic accounts, but never investigated in detail. In her meticulous study of Bemba farming in Rhodesia, Audrey Richards would briefly discuss food scarcity and adaptation in the face of famine (1939:35-37); so too E.E. Evans-Pritchard in his portrayal of the Nuer (1940:75-78, 82-84). Malinowski would make passing reference to famine among Trobriand cultivators (Malinowski 1966 [1935]:160-165). While these ethnographers gave detailed accounts of subsistence strategies, none lived with their informants through a period of famine. Thus mass starvation remained an abstract possibility in the ethnographic record, under-researched and analyzed in the abstract (Torry 1979:518, 521; Rangasami 1986:1591).³

² While Sorokin's draft predates many of the works listed here, the manuscript sat unpublished for over 50 years. It was published posthumously in 1975.

³ This deficit was not ignored by the anthropologists in question. Richards gives insight into how scarcity shapes Bemba values and presciently calls for future research to investigate the effects of seasonal undernutrition on health, growth and development (1939:37).

Anthropologist Raymond Firth returned to Tikopia in 1952, after an absence of 25 years. Accompanied by his much younger research assistant, James Spillius, the pair arrived just weeks after a cyclone devastated the isolated island's horticulture. Firth's account, published in *Social Change in Tikopia* (1959), traces the Tikopia's social and economic preparation for and adaptation to famine (1959:51-105). Spillius stayed a full year after Firth's departure. His short account is valuable for its nuanced consideration of the observer's role. Spillius was simultaneously anthropologist, government proxy and honoured guest (well-fed from his own tinned supplies, he was nevertheless socially obligated to accept food from his starving hosts). Spillius wrote in detail on his efforts to balance research objectivity against human need and social obligation in the web of local politics that surrounded the relief effort (Spillius 1957a:3-27 and 1957b:113-124).

Many years later Colin Turnbull lived alongside Uganda's Ik as they experienced extreme deprivation and starvation, a result of land annexation and resettlement. Turnbull documents two extended periods of ethnographic fieldwork, from 1964 to 1967 in *The Mountain People* (1972), a book that still divides opinion 40 years after publication. Turnbull's book is criticized for factual inaccuracies, moralizing and superficial ethnographic and theoretical treatment (e.g. Heine 1985:14-15). Despite the book's numerous faults, it is rich in self-reflection. While far from academically rigorous, Turnbull's work exposes the moral dimensions of hunger; in particular, the emotional conflict of the ethnographer confronted by others' starvation. For this fact alone the book marks a significant change in anthropological approaches to hunger.

Earlier ethnographers seemed to take hunger, scarcity and occasional starvation more or less for granted; a fact of life (Torry 1979:518, 521). In the best tradition of empiricism, as much as possible such an event was to be assessed objectively for what it could reveal of broader social

trends. Sorokin wrote objective analysis on an empty stomach in 1922. In 1952 Firth spoke from the perspective of a humane but professionally disinterested participant observer (see Firth 1959:19-28; 51-105). Writing of the same events, the much younger Spillius was perplexed by the turmoil around him, the social upheaval of hunger and the ethical complexity of the ethnographer's involvement therein. Nevertheless, Spillius attempted to remain dispassionate and turned his complicated involvement into ethnographic reflection (Spillius 1957a:3).

Turnbull, on the other hand, was vocally and unreservedly outraged. His rage may partly have been a consequence of his effective powerlessness. Where Firth and Spillius acted in a quasi-governmental role, advising and distributing relief (Firth 1986:2106; Spillius 1957a:4), Turnbull, despite being an experienced ethnographer, was an outsider. His attempts to raise an alarm to Ugandan officials were rebuffed (1972:284-285). His reaction may also partly have been a symptom of the times: the 1960s and 1970s marked a shift in academia in general towards a more outspoken, activist scholarship, one that was acutely aware of politics and the colonial legacy of the university (e.g. Gough 1968; Said 1995 [1978]). This was indicative of a turn in civic life at large—a combination of large-scale political disillusionment and citizen action in Europe and America (Knauff 2006:414-417; Campbell 1998:514-519). Ethnography's new, self-conscious, politically engaged persona is reflected in the character of Turnbull's writing. More changes than just the tone of the narrator's voice. There is a change in the content, theory and context of writing. In the genealogy of anthropological starvation-literature, Turnbull signposts a change in anthropological perceptions. Hunger is no longer a fact of life nor is scarcity an assured seasonal inconvenience. They are avoidable political-economic malfunctions, often with social inequality and injustice at the root. His was the first of a long line of anthropological analyses (far more systematic and nuanced than his own) that took starvation out of the context of the natural world and put it squarely in the human sphere (e.g. Rangasami 1985 a and b; de

Waal 1997 and 2005; Nichter and Kendall 1991; Scheper-Hughes 1993; Leatherman 1996 and 2005).

This change is important because it moves the blame for hunger. While still a fact of life, suffering became a matter of concern and a consequence of people's (communities' or governments') action or inaction. As such, other people's hunger took on explicitly moral dimensions. Discourse about food became discourse about values, rights and responsibilities. Politics entered the anthropological account in such a way that the ethnographer could no longer claim to be a disinterested observer of social reactions to natural phenomena. Instead the ethnographer became an analyst and commentator on the people and structures that give rise to starvation.

This change in anthropological discourse—part of a post-colonial reflection that emphasizes the political origins of mass starvation over ecological ones—did not emerge solely from anthropology, but certainly found vocal proponents there. The rise of anthropological concern with the politics of food was contemporaneous with the rise of humanitarian NGOs designed to combat starvation (see the following section). These developments coincided with—or, rather, reinforced and were reinforced by—rapid social and technological change in other spheres: the emergence of a post-colonial consciousness, popular uprisings globally and technological revolutions such as the peak of the Green Revolution in the late 1960s, the advent of truly global logistics—rapid civilian passenger and cargo shipping networks—and communications: “satellite broadcast [that] brought starvation to middle-class living rooms worldwide”(Redfield 2008a:151 also see Redfield 2013:33-34, 71-72). These changes signpost a broad shift of Euro-American consciousness that, Joel Robbins argues (after Weber), might

express an overarching concern with human suffering as a universal, unifying attribute of humanity (Robbins 2013:447-448).

In anthropology and related disciplines, these concerns manifested in a focus on mass hunger at the household, community and institutional level. A variety of authors speak to the issue in different ways. Development economist Amartya Sen's entitlement theory was pivotal to establishing this political discourse in the social sciences. In *Poverty and Famines* (1981) Sen contested the assumption that starvation was a direct consequence of food shortage. Instead he proposed famine was characterized by an inability to access food. This is not a semantic difference. With specific reference to India, Sen noted that, even in periods of extreme scarcity, food is usually available, but priced out of reach. Individuals starve when they lack the financial or social capital to legally and legitimately access commodities, regardless of whether these commodities are readily available. Historical famines were characterized by periods of rapid and large-scale disenfranchisement or loss of entitlement. Amongst India's poor agriculturalists, flood or drought could provoke such a loss of entitlement, but so too could a bumper harvest, if it triggered a drop in grain prices and subsequent fall in the value of a farmer's crop. Thus starvation, Sen argued, is caused not by lack of food, but lack of entitlement, that is to say, inequitable distribution of access to resources and social influence (Sen 1981:1-8,154-166).

After Sen, Amrita Rangasami argued that famine was not a moment in time, but the culmination of a lengthy process (often years) of impoverishment: a cumulative erosion of rights, resources and means. Dramatic public events, such as flood or drought, could tip a population into mass starvation, but only when that population had suffered prolonged exclusion. Famine is the tail end of a long-term the erosion of people's economic, political, social or environmental resources (Rangasami 1985:a and b; 1991:46; Keen 2008:105). Rangasami further argued that

relief aid always comes too late—at the end of this process—long after the worst of the damage is done. Wandering, dispossessed, starving people make famine visible. So aid hastens to those people—years after their livelihoods and political rights have been debased (Rangasami 1985a:1748, 1750; 1991:47). Rangasami also drew attention to the political and economic utility of famine. She noted that while the long process of impoverishment and famine has its victims, it also has beneficiaries (Rangasami 1986:1597-1600; 1991:48,57). People profit in times of starvation: there is cheap land, cheap labour and business opportunity. Therefore some have an interest in perpetuating famine. In his succinct exposition of Rangasami's ideas David Keen gives this illustration from his own work in Sudan:

Just a few miles from Meiram famine camp (the site of some of the worst mortality figures ever recorded), a feast was prepared for aid workers, traders and local officials. Every kind of culinary delicacy was on offer. The host was a northern merchant involved in famine relief, who told me the famine had been sent to him by God (Keen 2008:114).

Keen explains that, while some may incur benefits by happenstance, others, like the merchant, actively exploit the situation; whether as salesmen, transporters or bureaucrats; whether operating legally or otherwise; whether taking advantage of people, price movements or aid shipments. Keen considers his style of analysis (and presumably Rangasami's) a turn on classic anthropological functionalism: seeing the institutional function in social dysfunction.

Rangasami's thesis retains its explanatory power. The process she outlined is at play in South Sudan's starvation dynamic—the specific mechanisms are visible in this ethnography (Chapters Three, Four and Five) and in the work of other commentators (e.g. de Waal 1997:86,105; 2014:349-350, 367-369).

Writing around the same time as Rangasami, Alex de Waal would trigger another key development in the anthropological view of mass hunger. de Waal's doctoral thesis was perhaps the first instance of an ethnographer setting out to deliberately conduct extended field research during a period of mass starvation. de Waal participated in the 1984-85 Darfur famine as a

researcher under the auspices of the Save the Children Foundation. de Waal's dissertation would result in his 1989 book *Famine that Kills* (2005 [1989]). The monograph chronicles the Darfur famine from the perspective of local people and with reference to the historical record. With the aid organization's support de Waal was able to carry out a deliberate and systematic study of Darfuri adaptations to extreme deprivation. The unique circumstances and the quality of the work made de Waal's book profoundly influential, both as an ethnographic study of the region and as an ethnography of famine.

As anthropological interest in hunger and inequality continued, the anthropology of food, food security and food policy emerged as a sub-discipline in its own right (Pottier 1999). The 1990s would see the publication of Nancy Scheper-Hughes' *Death Without Weeping* (1993), an influential polemic that gave a stark account of starvation and child mortality in Brazil's slums. It is perhaps the first ethnography to examine starvation as an urban phenomenon: challenging the popular conception of acute starvation as an exclusively rural phenomenon. The 1990s also saw a strong turn to bio-cultural and political-ecological approaches to hunger. These combined work in biological, economic and social anthropology to attempt whole-systems accounts of the manifold factors that impact on nutrition at the household and individual level. Katherine Dettwyler adopted a bio-cultural approach to chronic malnutrition in *Dancing Skeletons* (1993) to examine how human physiology influences social practice, and vice-versa. Thomas Leatherman (1996, 2005) became perhaps the best-known proponent of a political-ecological approach that tries to map how social, economic, political and ecosystemic factors impact on health and nutrition at the individual and household level. From the household and community level, anthropologists came to focus on complex and hierarchical institutions that define policy. Devi Sridhar's (2008) work with the World Bank, along with David Mosse's *Cultivating Development* (2005), a profile of international development consultants, deserve mention as ethnographies of

major international development organizations concerned with nutrition. While international nutrition programs in India are the ostensible subject matter, both books examine how development institutions assert authority, produce knowledge and justify relevance: a (not always intentional) process of self-replication that perpetuates a political-economic status quo defined and driven by elites. Both expose the central role of international institutions in defining hunger-crises: what makes crisis is that which can be appropriately measured and responded to (Sridhar 2008:103-105; Mosse 2005:179). Sridhar and Mosse also highlight a key challenge of organizational ethnography: the tension in the role of ethnographer within the institution (Sridhar 2008:9-12; Mosse 2005:xii and 2006a:935-936). This raises ethical questions of where the anthropologist's ultimate responsibility lies and whom the anthropologist can rightly claim to represent. I examine this topic in more detail in Chapter Two.

In the present day, studies of practice, policy and institutions are a central concern. Today, it is axiomatic to say that political institutions and civil structures are inexorably linked to conditions that perpetuate hunger. This is a theme taken up in another anthropological literature: the anthropology of contemporary humanitarian intervention.

Anthropologies of Humanitarianism

The emergence of specialist, technical institutions dedicated to addressing the human consequences of emergency is one of the more notable developments of the late 20th century (Calhoun 2004:373-375). Today there are various shades of governmental and non-governmental aid and relief agencies. Many of them frame their corporate mission in terms of humanitarianism. This specific, institutional focus on using rational methods in explicit service of humanity is

historically and sociologically significant. The concepts of “humanity” and the “human” are so pivotal to Euro-American consciousness that they seem incontestable. However, this has not always been the case. The notion of a single race of humanity is a relatively recent development in Euro-American thought (Mazlish 2008:1-3; Redfield 2014). Humanity as a conscious agent—a unified force for political change in the world—is an even more recent invention, one that can trace its roots to the international governance and legal regimes of the post-World War II era (Mazlish 2008:3, 17-29).

The sympathetic impulse we associate with humanitarianism has a long history. Redfield traces the emergence of secular compassion to the time of the Enlightenment. The idea that life itself is a virtue led to humanist—as opposed to religious—motives for charity (2006:3-5; 2013:40-45). While the impulse has existed for longer, “humanitarianism” as a category of action—intervention in recognition of a shared condition or status of being—is about two hundred years old. The word entered common European usage around the end of the 19th Century, a catchall that encompassed, among other causes, abolitionism and child labour reform. It came to signify “compassion across boundaries,” a recognition of a shared human condition. From its earliest usage, a sense of transcendence underpinned both the humanitarian act and the fact of being human—as if recognition and participation in a practice of humanity made one part of a larger whole. The emergence of humanitarianism mingled with other late-century movements—suffragism, workers’ movements, a colonial consciousness—to create a global (or globalist) élan (Barnett 2011:19-20).

In the 20th century, impelled by a flurry of internationalist activity in the wake of WWII and the Holocaust, humanitarian intervention—in the sense that we know it today—was born. The basic fact of being a human in a situation of extremity was reason enough to legislate or intervene medically or militarily. In this way humanitarianism—a politics of life—became one

among several core principles that govern our age (Stevenson 2014:3-4,88-91; Barnett 2011:8; Fassin 2007:508-514). Humanitarianism became a dominant moral trope of international discourse (Fassin 2012:1).

Humanitarian precepts include the sacred quality of human life, the universality of experience (especially the experience of trauma and suffering), the dignity of the person and the duty to aid those who might be suffering, according to our individual means (Ticktin 2014:276). In the 20th Century, humanitarianism shed associations with abolitionism and child welfare. These were issues of rights—increasingly the terrain of a distinct human rights movement. Humanitarianism came to be associated with needs—manifest through efforts to save life and alleviate suffering (Ticktin 2014:274). Today, the most broadly accepted definition of humanitarian action is the rapid response to basic human needs in the wake of catastrophic upheaval (Barnett 2011:161-219; Redfield 2013:35-57).

Until recent decades anthropology has had relatively little to say about humanitarianism (Harrell-Bond [1986] and Malkki [1995 and 1996] are notable pioneers). The turn of the millennium saw a rapid growth of anthropological literature examining humanitarianism and its rhetoric (Robbins 2013:448, 453). For anthropologists, humanitarianism's moral calculus is both alluring and problematic. Humanitarian action is, by definition, interventionist. It insists that—when human life is threatened—both ordinary citizens and people in positions of power have a duty to act (Terry, 2002:19; Redfield 2013:42-57). Shared humanity overrides other boundaries—of race, gender, geography or international law (Terry, 2002:19). This is a source of humanitarianism's moral appeal and rhetorical power—one used to effect by the agencies themselves. The humanitarian imperative makes ethics (a moral justification)—not legality, custom or convenience—a measure of an actor's legitimacy. Because humanitarian aid agencies are, for the most part, Euro-American institutions, the nature and circumstances of the exchange

often give one party a degree of dominance over the other. The humanitarian act often has the character of a unilateral intervention (Terry 2002:19-20, 24-25). Humanitarian motives and means impart and project power (Fassin and Pandolfi, 2010:12; Keen, 2008:116-118).

Much anthropology focuses on the unintended consequences of humanitarian intentions. This critical anthropology combines contemporary interpretations of Foucaultian biopower (drawing particularly on the work of Giorgio Agamben) with anthropological theories of transnationalism (Ticktin 2014:277-78). Anthropologist Didier Fassin has been particularly influential in this critique that highlights the production of instrumental categories of exception, urgency, victimhood and morality: a politics of suffering that justifies unilateral intervention and places the rescuer beyond moral reproach (for examples of this analysis, see Agier 2010; Fassin 2007, 2012; Fassin and Pandolfi 2010; Fassin and Rechtman 2009; Fassin and Vasquez 2005; Müller 2013; Pandolfi, 2000, 2010; Redfield, 2005, 2006, 2010; Stevenson 2014; Ticktin 2006). Critical anthropologies examine how the practice of humanitarian action generates new categories of space, personhood and events.

Ticktin (2014:278-280) divides the central contributions of critical anthropology of humanitarianism into three key observations: on places, people and events. The first is on the nature of space in the humanitarian setting—wherein humanitarian motives and the concept of emergency are used to invoke “states of exception” outside the norms of everyday governance. The humanitarian setting (most iconically among these, the refugee camp) is a place where everyday rules are suspended and an extraterritorial kind of sovereignty applies (Redfield 2005:341-342; Ticktin 2014:278-279).

In the same way as space is redefined, so too are people—placed in the roles of victim and rescuer, or as a statistic in the face of bureaucracy. Humanitarians find themselves in the

uncomfortable position of controlling access to limited resources—the practice of triage—while aid recipients find themselves passive petitioners. Maintenance of bare biological life takes priority over regard for personhood or biography. All of these patent inequalities occur in the face of a humanitarian rhetoric that insists upon universality and equality (Redfield 2005:342; Fassin 2012:3; Ticktin 2014:279-280).

Finally, in its treatment of events—wars, epidemics and disasters—anthropology points to the ways in which aid can fuel conflict, breed dependency, exacerbate disparities or smooth the way for authoritarianism, rent-seeking and predatory capitalism. The humanitarian concern is not to remedy systemic inequality or injustice, but to address individual suffering, here and now. With this focus on immediate, individual suffering, the humanitarian apparatus has grown to displace sectors formerly managed by the state—sectors mandated to balance present and future need. Humanitarian action—meant as a temporary stopgap measure—has in places come to substitute for long-term governance (Pandolfi 2000:31). External intervention can, on the one hand, undermine government in the eyes of the people, and, on the other, cover inaction on the part of officials (Ticktin 2014:280-281); from my own experience during a large-scale MSF response to an unprecedented epidemic in Nigeria, a federal public health official informed me he asked the state governor how his administration was addressing the crisis; the governor replied, with evident satisfaction, “Don’t worry! The foreigners are taking care of it for us!”

Largely due to Fassin’s depth, breadth and prolificacy of analysis, his Foucaultian-influenced critique of humanitarian motives is the dominant theme in the anthropology of humanitarianism at present. Much of this critical anthropology of humanitarianism is thickly nuanced and, through layers of analysis, draws attention to the unintended, often unseen, consequences of good intentions. Done subtly, critical analysis is a form of astute consequentialism (e.g. Redfield 2005; Fassin 2007; Lakoff 2010). Not all critical analysis is done

with subtlety, however. Arguments may also slide too easily towards blunter notions of humanitarian actors as unwitting dupes of neoliberal globalism—and globalization itself as the successor of colonial imperialism. As Michael Barnett dismissively sums up some of the clumsier arguments: “Humanitarianism is one part Trojan Horse, one part opiate.” (Barnett 2011:6; see also Scott-Smith 2015a:34-36).

Certain anthropologies of humanitarianism risk oversimplification and excessive moralizing. Much writing in this vein is tinged with righteous indignation. To some degree, this maybe intentional: polemic as a rhetorical device (Redfield, 2010 pers. comm. 22 Oct). Yet it remains, at times, overwrought or conspiratorial. Pandolfi, for example, decries a “humanitarian agenda” that “serve[s] to link transnational forms of domination to local political practices.” (2000:31). This may be a deliberate rhetorical exaggeration. But Pandolfi’s assertion that a coherent political agenda exists stretches her interpretation beyond the evidence. As Hugo Slim notes, “The idea that humanitarian aid and the disparate array of humanitarian agencies could significantly govern anything is seriously questioned by ... field studies.” (2014:10).

Slim has recently launched a critique of the turn to Foucault and Agamben in humanitarian scholarship (2014). He acknowledges the perspective’s powerful contributions (Slim 2014:2), but notes an overbearing tendency in the analysis. Foucault’s “hyper and pessimistic activism,” (Foucault, quoted in Slim 2014:3) makes the analyst alarmist and hypervigilant. Thus “the gaze of critical theory naturally assumes oppression wherever it looks.” (Slim 2014:3). The focus of academic opprobrium becomes the subtle control exerted by humanitarian agencies (census taking, health education, food distribution)—rather than the authoritarian instrumentalization, lucre, militarism, and brute violence that bring people into the humanitarian gaze in the first place (Slim 2014:5). I share Slim’s circumspection. An overly-critical gaze makes it hard to acknowledge subtlety, nuance, self-awareness, contradiction, introspection—strengths of the

anthropological approach. While this thesis works from critical anthropology's macrosociological insights of humanitarianism, it is also a critique of the same. To contrast the biopolitical superstructure, I hope to draw attention to the subtlety and ambiguity of individual humanitarian encounters. In doing so, I hope to demonstrate how biopolitical structure, individual agency and technologies are mutually constitutive.

Anthropologies of Care and Bureaucracy

Two small but growing areas of anthropological focus in recent years have been the topics of care and bureaucracy. With their focus on how individuals navigate large-scale structural forces, these subjects hold potentially important insights for the anthropologies of humanitarianism. Anthropologies of care examine how individuals attend to people or subjects of concern through intimate, day-to-day interaction; the new anthropologies of bureaucracy examine how people navigate the corridors of institutions. Both these subjects focus on how people—largely powerless in the face of indiscriminate biological or institutional forces—make the best out of the matter they are given. Reality may be brutal, but it is not entirely immutable.

Through an anthropological lens, care is about how people attend to messy, everyday realities of life. While care is often taken as attribute of medical practice or attendance to suffering, studies of care are not limited to these contexts. Ethnographers have examined care in the context of hospitals (Mol 2008), urban poverty (Han 2012), food preparation (Yates-Doerr 2012; Heuts and Mol 2013) and government bureaucracy (Stevenson 2014).

Care can be careful attention to any circumstance; an attentive practice of valuation and adaptation focused towards a near-future benefit. "Caring is an activity in which valuing is implied—both caring *about* and caring *for* have a 'good' at their horizon. At the same time caring

indicates efforts that are ongoing, adaptive, tinkering and open ended.” (Heuts and Mol 2013:130; italics in original). As defined by anthropologists who study it, care is any practice that accepts things as they are but seeks to “*make them good*” (Heuts and Mol 2013:137; italics in original). Care is not about control and not, most of the time, transformative. Care is about appreciating reality for what it is and making small adjustments within that reality towards a roughly defined future benefit. Much of the time this benefit may be very modest indeed: a little less pain, a sound night’s sleep or a nourishing meal (Mol 2008:46-47; Han 2012:163; Stevenson 2014:176-177n.6). These anthropologies of care are both a complement and counterpoint to the anthropology of bureaucracy. Care oftentimes unfolds against a background of administrative governance or in response to it (Mol 2008:2-6; Han 2012:132-136; Stevenson 2014:75-100).

Bureaucracy holds a central place in theories of modernity and power (Weber 1978, Foucault 1982; Ferguson 1990; Scott 1998). Yet because of its association with petty officialdom, monotony, inscrutability and triviality (perhaps also because of its ubiquity) anthropologists have traditionally disdained bureaucracy as a focus for participant observation (Graeber 2012:105-106; 109-111; Bear and Mathur 2015:19). This changes, however, as increasingly bureaucracies are seen—not only as repositories of official knowledge and power—but as central sites of interpersonal action in transnational modernity (Riles 2008:392-393; Hoag 2011:88; Graeber 2012:111; Bear and Mathur 2015:19).

While some anthropologists of bureaucracy have characterized bureaucratic structures as “areas of violent simplification” (Graeber 2012:106), others are inclined to a more discriminating approach. Bear and Mathur, in particular, point to “nuanced ethnographies that have revealed the subtle negotiations of power characteristic of bureaucratic encounters between officials and clients.” (2015:19). In their view, because bureaucracy is ostensibly about public service, it can represent an affective embodiment of citizens’ values, hopes and desires for a public good; it is

the channel through which citizens are meant to access the promises of the state. These aspirations are imperfectly realized through institutional structures. Bureaucracy may encode social values such as equality, opportunity and transparency but also embodies social realities, which often include patent inequalities. Thus through an examination of bureaucracy, anthropologists can gain insight on the “unresolvable tension between desires for the collective good and the reality of inequality.” (Bear and Mathur 2015:19-20).

From this perspective, the anthropologies of care and bureaucracy can be considered two sides of the same coin. Where anthropologies of care are concerned with how individuals, imperfectly, attempt to manifest value on a personal level, the anthropology of bureaucracy deals with how value is imperfectly manifest through institutions. Both anthropologies attend to social attempts to work towards some modest, desirable, near-future outcome—and in this sense, both can be considered to work under Robbins’ (2013) conception—outlined in the introduction—of an anthropology of the good.

When care and bureaucracy meet the outcomes can be unpredictable. Just because people and institutions labour under the auspices of the good, does not mean that good results from the endeavour. Anthropologist Lisa Stevenson has recently brought together the literatures on care and bureaucracy. In her monograph *Life Beside Itself* (2014) Stevenson introduces the notion of “anonymous care” to describe how well-intentioned concerns for professionalism and efficient administration can transform the act of person-to-person care into an impersonal transaction. Her examination of how institutional reasoning conceptualizes and delivers health parallels many of the issues visible in humanitarian intervention.

Writing in reflection on the anthropologies of humanitarianism (the same literature reviewed above), Stevenson uses the ethnographic example of a suicide hotline in Canada’s arctic

for insight on how the best of bureaucratic intentions affect healthcare at large. She demonstrates how anonymity is foundational to the idea of the suicide hotline. Not coincidentally, anonymity is also a central value in Euro-American biomedicine. In most Euro-American biomedical ethics, people are entitled to basic medical care regardless of heritage, circumstances or past decisions. Individuals' identity should be irrelevant, and the details of their afflictions should not be a matter of public record (Stevenson 2014:85-87).

Anonymity is also a principle within humanitarian action, both for the patient—deserving of care on the basis of their humanity alone—and the practitioner, who should undertake humanitarian duties without expectation of fame, gratification or substantial remuneration. Just as the roots of humanitarian values can be traced to the Enlightenment, so too the rise of concerns for confidentiality and anonymity. These are temporally and socially specific, but they have come to characterize concepts of professionalism (Stevenson 2014:75-76, 79, 85). Through the same forces of enlightened liberal statecraft, the individual (though faceless and nameless) has come to be seen as the unit of focus. All attempts at education, promotion and preservation are focused on this unit, at times to the exclusion of other factors, such as the effect of social and environmental conditions (Stevenson 2014: 26-29, 50, 81-83).

In this environment, “Care quickly becomes linked to surveillance.” (Stevenson 2014:78) While this medical professionalism promotes confidentiality and anonymity as public goods, the character of anonymity is also the product of a humanitarian concern that elevates “life” (in the sense of continued biological existence) as a supreme goal—one amenable to measurement and intervention (Stevenson 2014:96). In other words, “bureaucracy is indifferent to persons and the personal” (Stevenson 2014:76); the bureaucratic effort to foster biological life (the only life it knows) obscures personal characteristics in the name of care. Individuals are seen, monitored and treated as undifferentiated members of a population. Anonymous care is a product of the

bureaucratic approach to the person. In the bureaucratic mode of care, it matters not who is cared for. It only matters that they do not die.

This is representative of what Stevenson, after Charles Taylor, calls, “bureaucratic ways of proceeding” (Stevenson 2014:60). In Stevenson’s formulation, bureaucratic ways of proceeding take the power of decision away from individuals; the possibility of modifying or ignoring the rules is circumscribed by the institutional configuration.

This process is fully embodied in the structure of clinical protocols. Protocols exist to at least partially lift the burden of decision-making from the practitioner. The burden is placed instead on the impersonal and unfeeling institution (Stevenson 2014:79). Proper care—ethical care—is administered through protocols. The protocol routinizes thinking, obviates the need to over-analyze or internalize the situation, it helps the clinician cope deal with the fractured body in front of them; the protocol protects both the patient and the practitioner (2014:81). Protocols ensure a certain standard of bodily care, but at the same time anonymize the relationship between patient and carer. Stevenson asserts that the psychic residue from this leaves little doubt in the subject’s mind that their life or death matters to the bureaucracy as a statistic but not as a person (Stevenson 2014:67, 72, 96).

Stevenson’s monograph unifies three anthropological literatures of humanitarianism, care and bureaucracy. In doing so she brings to light important questions on how care and personhood are expressed in the context of institutions. This thesis takes up some of these questions.

Thus humanitarian action argues for human universality; this translates into (among other things) a focus and concern with hunger. Starvation is a trauma to which we are all, in

theory, universally vulnerable. It is also a phenomenon with political roots, something that can be addressed through action. The invocation of emergency is a driver of the process—to bring clarity, impel urgency and a narrative arc. Underlying these is a broader concern with ethics and right action, and how these might be expressed through individual acts (care) and institutions (bureaucracy).

Anthropology demonstrates that any human phenomenon is socially situated; the very practice of naming or identifying a phenomenon is social. Despite profound physiological consequences, the various shades of nutritional emergency are no exception. Mass starvation is anthropogenic, as Sen, Rangasami and many other commentators have demonstrated. It happens when entitlements are eroded—when agency, land rights, assets or access to resources are transferred to others. Thus mass starvation has victims, but also beneficiaries. In short, mass starvation has a function. It may be wrong to think of hunger-emergency as an event, an external happening or a season in time. It is first and foremost a socio-political process (Sen 1981; Rangasami 1985a and b; de Waal 2005; Keen 2008). The same can reasonably be said of any contemporary declaration of emergency.

In the wake of disaster the drive to “save life” eclipses other considerations; the declaration of emergency imparts moral clarity to action (Redfield 2013:1, 32-33). The rhetoric of emergency permits everyday rules and norms to be suspended (Calhoun 2004:374-375); it elevates those who intervene to a higher moral ground, beyond casual critique (Redfield 2013:34-36). Declarations of crisis also aim to assert or re-assert structure and governance over chaos—a reestablishment of moral order (Douglas 2002:3-5). This drive to bring order to uncertainty hints at the promise that technical expertise holds to delineate emergency. Public crisis—and the outpouring of aid and goodwill that often accompany it—is ripe for profit (Keen 2008:123-125).

Relief or access is often controlled or determined by the state—themselves implicated in the preconditions that led to emergency (Slim 2014:5). Even the most disinterested of aid providers have agendas beyond bare relief from suffering. Aid and aid agencies are self-referential, self-interested and self-replicating (Mosse 2005:179; Pandolfi 2000:36-38). This leads to the tendency to read starvation in a certain way: to make it legible to institutional measurement, to define the problem according to the solution the agency is best equipped to provide (Sridhar 2008:85-105). The overall effect is a conception of hunger as a technical malfunction that can be addressed by swift, competent and unquestioned technocratic expertise.

While emergency may refer to and be a signifier of external events, it is a collective social practice that serves an instrumental purpose; emergency is a call to action that marks a break with the everyday. Declarations of emergency are moral assertions that allow the suspension and override of existing rules and norms. Viewed from an anthropological perspective, emergency is a liminal state. Like any social upheaval, hunger-as-emergency has a dramaturgic character. It follows the narrative evolution of a ritual; from what is characterized as a comparatively innocent pre-emergency phase, to the liminality of emergency (a state of exception) and then through to a post-emergency, reintegration phase. This is part of its sociality: what makes it coherent. Institutional narratives apportion meaning and blame (Douglas 2002:xii-xiii, 48-50; Oliver-Smith and Hoffman 1999:5-10). Narratives may project influence; the dominant narrative often meets the interests of the privileged or powerful. The rise of emergency as a category parallels the rise of large-scale rationalist institutions and managerialism as the major organizing principle of public life (Calhoun 2004:380-384). Findings are translated into a format that is meaningful for the institution, and incorporated as part of the dominant institutional narrative. These formats are predominately quantitative. There is a strong tendency to view starvation and nutrition through the lens of economics. Contemporary debates over hunger and disaster are one facet of a larger cross-disciplinary debate that pitches economic concerns together with environmental

and population concerns (Sridhar 2008:105). These debates reveal shifting values and morals within contemporary society, as economic welfare comes to be seen as increasingly integrated with welfare in other spheres (Sridhar 2008:94-97).

Yet response to emergency is not entirely about techno-scientific elicitation; circumstances, motives and means also come into play. If emergency is viewed as a threat—not only to biological integrity—but to integrity of mind, self and group then other means of knowing emergency become possible; multiple “registers of value” (Heuts and Mol 2013:125) are revealed as individual attempt to make sense of the situation they find themselves in. The right answer or the best solution are rarely apparent. Viewed from the perspective of anthropologies of care, response to emergency may not be a matter of logical discrimination, judgement or choosing between defined options, but a question of how varied, chaotic and rapidly changing circumstances, motives and means are made to cohere or hang together. All these attempts to formulate a humane response to suffering can be viewed through the lens of the anthropology of the good, “the different ways people organize their personal and collective lives in order to foster what they think of as good, and to study what it is like to live at least some of the time in light of such a project.” (Robbins 2013:457). The good Robbins describes manifests in different ways—as a concrete end conceived and worked towards, as a social expression that is manifest between two or more people, or as a hope for futures that are better than the present.

The central question of the thesis emerges from these literatures. Emergency can be understood as a social and moral practice, a political-economic phenomenon, a corporate concern and an individual experience. Each of the literatures profiled explores one or more of these dimensions of emergency. If emergency is all these things, and more, this thesis examines

how these individual aspects are made manifest and how they are made to cohere as one thing: the named, actionable entity of medical humanitarian emergency.

The following section outlines how this central question can be viewed from the three bodies perspective mentioned in the introduction. It brings together insights on the body by Douglas (2002), Scheper-Hughes and Lock (1987) and Mol (2002) to align the anthropologies of starvation, humanitarianism, care and bureaucracy. I offer a theory of how human starvation is conceptualized and promoted as emergency in a humanitarian context. I suggest that the central moral issues at stake in humanitarian approaches to mass starvation are ones of definition—ultimately questions of epistemology and ontology—and expand upon some of the insight that a focus on enactment might bring to the study of humanitarian action.

Framing the Question: An Emergency Multiple

At the start of the thesis I noted the problematic character of emergency language, in particular the word famine. Whether in the popular mind or under the microscope of analysts, the idea of famine is inarticulate. de Waal devotes most of the first chapter of his landmark book to the genealogy of the concept—yet stubbornly avoids a definition himself (2005:9-20). Like de Waal, academics and aid agencies generally embrace a view of famine as a complex, prismatic social and political phenomenon (Keen 2008:100-109; Gazibo 2009:46-49). Much of the professional language of starvation—for example, its differentiation between nutritional crisis and nutritional emergency—attempts to capture aspects of this complexity.

This multifaceted conception can be extended to many forms of nascent emergency. Peter Redfield's essay "On the Verge of Crisis" (2010) illustrates this well as a group of Médecins

Sans Frontières aid workers confront hazy moral categories of crisis in northern Uganda. On the edge of a decades-old on-again-off-again insurgency, life is a transitional zone between peacetime and wartime. The aid workers monitor public health and nutritional indicators that are bad, but not dire. Population health is poor but stable, yet at a push can tip into emergency. The aid workers' tools and methods are designed to address catastrophe (an objective, visible event), not grinding misery (a subjective state). Redfield finds aid workers waiting to attend to an emergency that never materializes (2010:191-192). As an aid worker reading his essay for the first time years ago, Redfield's account rang true of my own experience.⁴ Most of the countries and situations in which MSF works teeter on this cliff edge between normality and catastrophe.

Aid agencies are acutely aware of this dilemma. The nature of humanitarian intervention is to address the visible, objective manifestations of need: clear deficits that can be met by material assistance. It is much harder to attend to the underlying subjectivities: the roots of crisis, the psychic remnants, the functions, interests and strategies of those who are participants in crisis.

Aid has always been subject to subversion (the political manipulation of aid has been a major part of specialist and popular aid discourse in recent years [e.g. Müller 2013]). A focus on the firm technicalities of need, where suffering is publicly reified or objectified into numbers—numbers of people uprooted, tons of commodities delivered, number of lives saved (or more accurately: lives prolonged)—can be a means for aid agencies to resist or contest subversion. The more objectively technical the intervention the more straightforward it is to standardize and measure inputs and, it is hoped, outputs. The trend to an increased technocracy of aid is part of a broader professionalization that attempts to make aid more accountable to beneficiaries and the public, and thus more resistant to political manipulation (Keen 2008:127-130, 140-143).

⁴ In fact, I was posted to Uganda in 2004. I was not present for Redfield's visit but can readily identify places and people in his account.

The drive towards technocracy in aid can be seen in the language of hunger. As noted above, the word famine is rarely heard. This is partly because aid professionals have a more nuanced understanding of hunger; they recognize a subtle series of gradations in deprivation that lead to increased peril for the individual or population. These are reflected in the vocabulary of hunger: food insecurity, nutritional crisis, nutritional emergency. Famine is also rarely used because aid professionals recognize its evocative, imprecise nature and its Malthusian implications. The word may be considered overly dramatic and therefore unprofessional; its biblical undertones may be unhelpful. More than this, there are political dimensions to the word famine. It matters who uses the word, when, where and with whom. An aid agency does not let drop the word famine in a government meeting or press release without careful consideration.

In place of famine, agencies prefer various shades of the concept of “nutritional emergency”. The shift in vocabulary is key, because it also signals a shift in analytical categories. As a category famine carries implications of whole systems: weather patterns, seasonality, agricultural practice, food practice, energy expenditure and physical wasting; it implies an interlinked cause and effect of environmental, social and biological factors. Nutritional emergency, on the other hand, focuses on a single factor: biology. The nature of the problem is defined as exclusively physiological—a problem of nutrition—to which is added the categorical, moral imperative of emergency.

Not coincidentally there is only one profession with expertise in the management of both emergency and human nutrition. The focus on nutrition highlights a physiological or biochemical imbalance; the implied solution is medical intervention to reassert homeostasis. The same holds for “emergency:” a hospital department where medical professionals stabilize acute patients (Redfield 2013:33).

Through transformation of vocabulary, mass starvation becomes the province of a specific group of technical professionals: medical-nutritional professionals of the kind that people MSF. Additionally, the focus on nutrition—the sphere of biochemists and medical doctors—makes the term a neutral (technical, professional or scientific) shorthand for large-scale starvation-related acute crisis. This removes hunger from the world of politics to place it on an objective footing. Famine is political. Nutritional emergency implies a technical problem with the promise of a technical solution. A boggy, socio-political mire is stripped back to expose biological bedrock amenable to intervention. Hunger is made apolitical and legible to technical expertise.

Asserting technical expertise in order to trump politics is a utilitarian tactic. But this has deeper implications: the change in vocabulary puts hunger on a different epistemological footing. As illustrated above, mass hunger is not easy to define. The nature of famine—its slow evolution, its mixed social-biological-environmental heritage—defies pithy description. Whether viewed as an event or a social experience, it is epistemologically complex: something sensed more than seen. As observers we might intuit the existence of famine through various signs: dry riverbeds, withered crops, skinny cattle, wandering, hungry people. Alternately, someone may tell us there is a famine. We can see or hear signs, we can make representations of famine, but we cannot see famine itself. The concept of nutritional emergency amends this.

Famine cannot be seen: it is indeterminate, subjective, stuck in preconception, politics, history and emotion. But hunger can be seen; or rather hunger's effect can be seen upon the bodies of those who starve. The effects of hunger can be measured on human physiology. Thus hunger-as-emergency enters the realm of nutritional anthropometry: the scientific study of human health and nutritional status through measurement of physical features.

Anthropometric measurement has a long, at times disreputable, history. In the 19th Century it came to be associated with racist typologies and eugenics. These would later be challenged by more nuanced studies of biological variability (Ulijaszek and Komlos 2010:185). It was Franz Boas, working just after the turn of the 20th century, who put anthropometry on its current trajectory as a gauge for human plasticity in response to the environment. Boas was the first to demonstrate that human morphology responded to environmental quality, noting the stature and weight of children born to immigrant mothers increased in rough proportion to the length of time the mother had spent in the United States (Ulijaszek and Komlos 2010:187). From anthropology, anthropometry transitioned to public health, where it was first used to measure childhood nutritional status in 1947 (Ulijaszek and Komlos 2010:190). Since the 1970s aid agencies have used nutritional anthropometry to measure the effects of hunger on human bodies in field settings, which is to say in the midst of large-scale social crises such as mass displacements. It is favoured as a method that is inexpensive, simple to deploy and quick to identify those most in need of assistance. However, as will be explored in Chapter Four, nutritional anthropometry also has blind spots and weaknesses. Its use as a child growth monitoring tool—and the validity of growth monitoring as a rubric for nutritional well-being—have been questioned over the years (see Sridhar 2008:158-161 for a summary). However, in emergent situations, such as mass displacement, anthropometry is acknowledged as a powerful tool—the nutritional diagnostic technique of preference—because it is simple, robust and accurate enough to gain a rapid and effective overview of this key facet of population health. As a technology it remains unmatched in its ability to assess prospective mortality related to malnutrition. It has doubtlessly saved millions of lives and has played a central role in bringing hunger onto global policy agendas. (Pelletier 1994:2076-2079; Schroeder and Brown 1994:572; Grellety et al. 2015:2579).

The simplest and most ubiquitous anthropometric measurement in emergency situations is obtained by measuring the upper arm circumference of a child under the age of five. The measure is most effective on children over the age of one year and under the age of five; these ages are experiencing their most rapid period of growth and are particularly vulnerable to infection and under-nutrition. The procedure is simple: a measuring tape is used to obtain the child's arm circumference in millimetres. The measuring tape is most often purpose-built; a simple bracelet with colours in green, yellow, orange and red to indicate the level of nutritional peril. A child's measurements are compared against what is normal for the age. This measurement of Mid-Upper Arm Circumference (MUAC) alone gives a general idea of a child's nutritional status. Beyond the MUAC, in an emergency setting other forms of measurement are possible and lend credence to diagnosis, for example, Weight-for-Height, which compares a child's vertical growth to body weight in order to detect growth stunting.⁵

Anthropometry is useful to the clinician. It can be used to quickly gauge the severity of a child's malnourishment. It can be used to track the progress of treatment. A clinician can use measurements to administer care. In this way, anthropometry is a yardstick of the level of emergency for the individual. But more can be done with these measures.

Public health people use anthropometry too. Public health practitioners can aggregate individual measurements to form a data set. To compile a data set transforms a collection of individual measurements into a population. When individual numbers are aggregated, and a different statistical procedure is applied, measurements that were previously used to gauge the level of emergency in individuals can now be used to gauge the level of emergency in a population. The World Health Organization guidelines consider it an emergency when 15% of children from six-59 months of age have a Weight-for-Height two standard deviations from the

⁵ Chapter Four describes the science and measurement process in more detail.

norm (WHO 1995:37-38). Standard Deviations and their use as a benchmark are described in greater detail in Chapter Four. In this case, the monitoring agency is justified (indeed, ethically bound) to signal an emergency. Hungry children, some simple measuring devices, a pen, paper and some growth charts, united under the gaze of expert eyes—properly coordinated, these things make famine visible.

Anthropometry is particularly suited to clinical and public health specialists, but is only one way of measuring hunger. To complement anthropometry, other specialists can measure crops or rainfall, or commodity prices and economic indicators.⁶ All of these systems are dedicated to the use of accurate measurement proxies to see, predict and know when hunger-is-emergency. Thus emergency is measured with grams and millimetres, scales and tick boxes. The millimetres of a child's arm or millimetres of rain are counted and aggregated into collectives. These collectives are designated as populations. The aid worker responds to an individual in crisis; but at the same time uses statistical techniques to transform hundreds of individuals into a single population. The sum of individual crises make for a population emergency. The inscrutability of famine has become something objective, measurable and knowable: it has been transformed into nutritional emergency.

This process—the manner in which numbers can be used to reveal the depth and extent of starvation (even where political actors would conspire to obscure it)—is one of the achievements of a technocratic approach to hunger. Starving children might be the subjects of emotional and political appeals, but it nutritional emergency that is a named, knowable, demonstrable and evidence-based entity.

⁶ The IPC, described above, combines all these measures and more to produce a single, integrated measure.

In coming to know and name the extent of emergency, however, something important happens to the status of the observer. The focus of enquiry changes. The passive observer—who attempts to conceptualize a phenomenon—transforms into an active participant who partakes in the constitution of the very phenomenon they attempt to objectify.⁷ Observation and measurement are a form of intervention. Through observation, MSF actively makes hunger “an object of public health concern” (Crombé 2009:60). In the process of trying to understand or know emergency one actively starts to do emergency. The observer has moved from an epistemology into an ontology of emergency, where knowing is inseparable from doing (see Mol 2002:5-7, 22-27).

In a medical humanitarian context this move is not accidental. It is, rather, the whole point. MSF acknowledges this situation; they use it to effect with the organisation’s core principle of *témoignage*, a French word implying presence, “being there” and testimony to one’s experience. Often translated into English as “witnessing,” the idea is foundational to the charter of MSF: the organisation touts twin principles of medical aid and open advocacy for people in perilous situations (Redfield 2006:5-14); MSF both makes emergency known, and, in a limited way, addresses the consequences. Like many other aid organisations or governments, MSF measures hunger’s impact on the individual body and aggregates these measurements. It uses human growth patterns as a barometer of both individual and population crisis. But MSF goes a step further: data that can be used to illustrate population health crisis can also be used to demonstrate a sickness within the body politic. In the tradition of Enlightenment science, MSF is a witness and spokesperson to the facts (Redfield 2006:17).

Metaphors of the individual body transfer easily to onto the body politic (see [after Douglas 2002:159] Scheper-Hughes and Lock 1987:7-8, 18-19, 23-24). The conditions that give rise to

⁷ For an account of this process in action, written by another hybrid MSF-academic, see Crombé 2009.

demonstrable crises of hunger are political: environmental, social and structural factors beyond the ken of the individual. The implication is that when children go hungry, there must be social or political crisis. Confronted with starving people, what is the doctor to do? Through the clever use and publication of data, the doctor and nutritionist transform clinical diagnosis into diagnosis of political crisis (Herzlich 1995:1618; Orkin 2010:5-6; Redfield 2013:31-32). Representations of the patient's body, foisted on the international stage, become a banner of that crisis. This easy transfer of body metaphors—from hungry body onto body politic—accounts, in part, for popularity of food aid and nutrition programming; "... rituals work on the body politic through the symbolic medium the physical body" (Douglas 2002:159). It is a short intellectual leap from feeding a hungry child to imagine that we are also nourishing the body politic (Fox 1995:1609; Scott-Smith 2013:926).

MSF's public and political stance is not accidental; it is an explicit choice of an organisation that uses medical practice to "diagnose" situations and structures that perpetuate gross human suffering and, in certain cases, to make a prescription for change (Orkin 2010:5-6; Redfield 2013:32) (Chapter Three includes an ethnographic example of this process in action). This MSF approach to nutrition contrasts sharply with the nutritional programs of the World Bank, for example. The Tamil Nadu Integrated Nutrition Project places the responsibility for under-nutrition on the doorstep of the home, citing the key contributors as poor feeding practice and lack of education (Sridhar 2008:76-80).

Three bodies—the individual, the population and the body politic—provide an entry point to MSF's approach to hunger and emergency. Annemarie Mol's *The Body Multiple* (2002) posits the theory of ontological multiplicity. Through fieldwork in a Dutch hospital Mol traces the course of an everyday disease, atherosclerosis, from individual patient experiences to the outpatient department, the surgeon and the pathology lab. She asks how we know

atherosclerosis. Mol finds that each person and each place make for a different form of knowing. The patient feels atherosclerosis in their legs; the surgeon interprets it from the patient's account; the pathologist reads it in dead tissue under a microscope slide. Each time the thing is known differently, with a different technique. It manifests in a different form. And that, says Mol, makes each form ontologically distinct. It is not the same object known using different techniques; it is the technique that gives the object its character. What the object is depends on the medium and the practice we use to know it. Atherosclerosis under the microscope is not the atherosclerosis that is felt in the leg: one is living tissue, sensed but not seen; one is dead tissue, seen but without sensation. Because the practice employed determines the object's character, the object is not so much apprehended in the world as it is enacted: brought into being through the course of trying to know it. Object and subject become inseparable. This implies that each epistemologically distinct practice creates an ontologically distinct body, the body multiple of Mol's title. These multiple bodies, though ontologically separate, are made to cohere or hang together under the rubric of atherosclerosis. It is not corporality but coordination of narrative and practice make atherosclerosis a thing, an object in the world (Mol 2002:1-7, 20-25, 29-36).

Three manifestations of hunger—crisis in the individual, crisis in the population and crisis in the body politic—raise the theoretical possibility of an emergency multiple: multiple entities that go by same name but that are ontologically distinct. Disclosed through methodologically disparate techniques, these three aspects of hunger-as-emergency are coordinated into a single narrative. The techniques used to perceive (or enact) hunger imply the action or intervention that must follow, which in turn may reveal another ontology. Hunger-as-emergency is both the practice that represents it and the practice that combats it; these things happen simultaneously.

Ontologies can disagree. Part of the coordination work is to keep eyes on uncertainties, to keep doubt alive, to question technicalities, to highlight and reconcile ambiguities (Mol 2002:66-

72). But when enough ontologies are brought into coordination—when enough evidence is accumulated—ontologies can be made to align, to cohere in such a way that a narrative thread is established between them. When this happens the ontologies are bracketed (in Mol’s words), or, in the words of Bruno Latour (1987:130-131), they become a black box. The detailed technicalities of how an ontology came about, the minutiae of measurement, the circumstances under which the data were gathered, are temporarily forgotten. In short, the coordinated ontologies become fact. Once facts are established hunger-coordinators can formulate plans around them. They can move on to the next round of enquiries, to questioning the ambiguities, doubts and technicalities that arise from this new alignment of ontologies (Mol 2002:64). This is emergency in action.

Much of what is done in a nutritional emergency has to do with establishing and promoting a more-or-less stable ontology; that is to say it has to do with “establishing the facts”. In clinical language this means “signs and symptoms” while in the language of MSF’s *témoignage* it is “bearing witness” or “speaking from experience.” In population-level data it is “looking at the numbers.” As I developed my understanding of the techniques and processes medical humanitarians use to identify and respond to emergency, these three bodies come to the fore. How this process of response is enacted, and how these three body ontologies—individual, population and political—are made to intertwine, are the core ethnographic components of this research.

Structure of the Thesis

From a “three bodies” framework of enactment the central thesis question—how medical humanitarian emergency is made known and actionable—can be broken into three sub-enquiries, each focused on a different body: how emergency is conceptualized and enacted at the level of

the body politic—how it is enacted at the level of the population—and how it is enacted at the level of the individual. Each of three ethnographic chapters will take up one of these questions.

The three bodies concept presented here is analogous, but not identical, to the three bodies proposed by Scheper-Hughes and Lock (1987). Scheper-Hughes and Lock argue that the body offers a ready tool for thinking about the relation of medicine and medics to the wider social world. They highlight the individual self (the “body-self”, lived sensory experience), the social body (populations and institutions, but also the body as a “natural symbol” for the functioning of society) and the body politic (structures of governance, power and control) as their categories of analysis (1987:7-8). My presentation of the three bodies differs in that I do not consider individual bodies in the experiential sense of embodied knowledge or sensory perception. However, in Chapter 5 in particular, I consider how knowledge of emergency may influence or be influence by personhood, lived experience, focused attention and individual motives. The problematic distinctions between individual and social bodies come to the fore in this thesis. Throughout the ethnography, individuals are also representatives of classes and categories of people—representatives of social bodies—thus blend with the latter category. The tripartite schema is not fixed. Scheper-Hughes and Lock posit the three bodies as a theoretical stepping-stone (“a prolegomenon to future work”), averring that other bodies may exist (e.g. see Hsu 2007, on the ecological body). Mol (2002) refuses to number the multiples of the bodies she describes; central to her analysis is the supposition that there are as many potential bodies (i.e. ontologies) as there are practices to describe them. Other approaches to the body in MSF are possible. I take little account here, for example, of the body of humanitarian law meant to protect aid in situations of conflict, nor do I attend to patient bodies in media portrayals. My comparatively short time in the field did not allow for exploration of these and other topics.

The fieldwork was carried out over the course of 11 months and in multiple sites of MSF operations. Chapter Two describes the methodology, methods and the location of the study—the people and places at the descriptive heart of the work. This chapter describes my ethnographic toolkit and the institutional processes I followed. Since my research would unfold in places that were simultaneously disaster zones and conflict zones I undertook a number of formal processes to ensure the research could be conducted in an ethical and reasonably safe manner. Those are outlined in this chapter. The chapter also describes further the institutional and geographical setting of the study, the structure of the aid agency MSF and their presence in the newly-formed nation of South Sudan. Finally, the chapter highlights an important reflexivity that must be acknowledged in any ethnography of aid institutions: contemporary humanitarian action is, at least in part, a product of and influenced by critical academic theory. Practitioners travel a well-trodden path between the aid world and the academy; key theoreticians have had seminal influence on the aid organizations' methods, techniques and self-critique. Thus the practice of humanitarian action cannot be separated from academic practice—they are reflexive and mutually constitutive. Academic critique of the aid industry is part of the aid industry—a fact that participant observers must approach with open eyes.

As one of the world's most prominent humanitarian agencies, MSF has had its share of academic observers. In anthropology, Peter Redfield has studied the organization for over ten years; he is considered the foremost anthropological authority on the organization and his recent book, *Life in Crisis* (2013), informs much of this thesis. It is important to note where these two works might overlap, and where they will branch in different directions. I use some of Redfield's key concepts as a point of departure into to further research. These include the ideas of MSF as “moral witness” (in particular the use of epidemiology and scientific research to produce “motivated facts”) and the “verge of crisis,” where emergency is indistinct and measurement is key to discovery. In my fieldwork I will examine these themes, specifically in reference to the

production of (medical) knowledge in uncertain or chaotic environments, how knowledge is translated in to prescriptions for action and advocacy. Redfield has exposed many of the techniques of knowledge-production in MSF. I hope to examine these further.

The third chapter examines the question of how emergency is conceptualized and declared at an institutional level—the abstract level of the body politic. It looks at how individual interactions contribute to group understandings. In particular, it examines the interaction between people and numbers in a collective, coordinated definition of emergency. Chapter Three introduces one of the most common and least public tools of decision-making in emergency: the meeting room. In the context of emergency—by comparison to humanitarian airlifts and hospitals—expert meetings receive comparatively little public attention. Yet, they are perhaps the central coordination forum for aid agencies. The ethnography describes two of the hundred-or-so meetings I sat in over the course of fieldwork. While I attended more dramatic meetings, and meetings where more consequential decisions were taken, I choose these two particular moments for practical reasons: they are typical in most respects, but particularly succinct—rich in meaning and nuance yet relatively compact in description. In the chapter’s central exposition, a snippet of conversation from a meeting introduces some key and recurrent themes of the thesis: the importance of insider knowledge; the collaborative and provisional nature of knowledge; numbers as a focus and currency of debate; the improvisational and chancy nature of intervention and notions of care that appear central to MSF’s worldview. This chapter also highlights the contemporary concern with and focus on appropriate responses to suffering—as embodied in a common (Euro-American) framework for aid, and why this aid action must at times appear absurd or incomprehensible to outsiders. This chapter introduces the key importance of numbers—in this case as worked and represented through epidemiology—as a key constituent in the making of emergency.

The fourth chapter takes up the subject of population-level perspectives (the social body) to examine the subjectivity of numbers in the medical humanitarian practice of therapeutic nutrition. It explores the role of practitioner discretion in the collection and interpretation of numbers. Chapter four examines the objectivity, utility and simultaneous subjectivity of numbers: in the words of one informant, “the dynamics in the details”. Through an ethnography of a patient’s journey in the MSF therapeutic feeding centre, the chapter considers how normative measures relate to unruly individual bodies. Measurement, it argues, is an inherently subjective practice, as numbers only tell half the story—the other half relies on practitioner interpretation at every stage of analysis. Central to this argument is a detailed examination of the measure of mid-upper arm circumference or MUAC. The MUAC is both a practice and a device. The practice of MUAC-ing, when done correctly, yields an approximate indicator of nutritional status and biological risk in children under five years old. It is a life saving diagnostic: accurate, robust and easy to administer under field conditions. As a device, the MUAC measuring tape—a bright plastic band coloured with a traffic signal of green, yellow and red—is one of the iconic symbols of medical humanitarian action. The MUAC tape is instantly recognizable and speaks unambiguously of the power of numbers to order risk and reality. The chapter argues that the MUAC’s iconic power is in many ways deserved. The MUAC tape, and the practice of humanitarian nutrition in general, are highly successful when measured in terms of their ability to stave off crude mortality in times of mass starvation. Part of the power of such measures, however, is that they are imbued with moral sentiments and expectations outside their original purpose. Chapter Four examines some of these sentiments in detail.

Chapter Five moves to the inpatient ward to take up questions of individual bodies and individual care. This chapter examines how interpretations of emergency translate into action and what the practice of emergency looks like at intimate scales. I examine in detail how care is administered at the bedside in medical humanitarian field setting. The chapter endeavours to

illustrate how twin practices of care and technocratic governance influence decision-making and action in medical humanitarian emergency, and how the bedside can influence other levels in the hierarchy. This chapter brings together theories of rational bureaucracy and of care-giving to explore whether, and in what ways, the act of care can be realized in a medico-humanitarian institutional setting. As noted in the literature review, other anthropologists (Fassin 2007:514-518; Ticktin 2006:44-45; Redfield 2005:339-341; Pandolfi 2000:36-38; Malkki 1996:390) have drawn attention to how the techniques of rational humanitarian bureaucracy, when put into the practice of emergency, can erode or work counter to a more humane or personalized practice of care or concern for individual welfare. The very structure and nature of rational administration, which sees numbers and policies but remains blind to people, means that institutional action intended to comfort and reassert autonomy among a population may discomfort and debilitate on an individual level. This chapter attempts to invert that assertion to examine the role of care and caring individuals within institutions. It asks whether the presence of carers and care as a motive within the institutions can affect the character of bureaucratic knowledge of emergency. This section highlights the tension between individual motives of care and institutional methods of rationality as being opposed yet simultaneously constitutive of the humanitarian act.

Though MSF as an institution is primarily concerned with identifying and treating the physical manifestations of human suffering, the ethnographic chapters raise the possibility that MSF's fieldworkers are driven to make sense of suffering through practice. The final chapter explores whether (through the enactment of care and personhood) members of MSF seek to operationalize an ethical conception of the good. Though arguably not explicitly stated in the organization's charter or mandate, an essential part of the organization's mandate of care might stretch beyond the provision of medicines to alleviate suffering, to encompass a presence and witness that can attribute meaning to suffering.

Chapter 2: Methods

The first rule of method [...] is the simplest of all. We will not try to analyze the final products, a computer, a nuclear plant, a cosmological theory [...]; instead we will follow scientists and engineers at the times and at the places where they plan a nuclear plant, undo a cosmological theory [...]. [...] Instead of black boxing the technical aspects of science and then looking for social influences and biases [...] how much simpler [...] to be there before the box closes and becomes black. With this simple method we merely have to follow the best of all guides, scientists themselves, in their efforts to close one black box and to open another.

Bruno Latour, *Science in Action* (1987:21)

The quote above encapsulates my research plan. I proposed a year-long, multi-sited participant observation of a medical humanitarian emergency, through the lens of aid agency structures and operations. My research focus would be the agency itself: how members of the agency interacted to produce a coherent and emergent narrative about the nature and extent of the crisis. Thus the research would go where the organization went in its pursuit of crisis—research methods and arrangements were preconfigured to make for a flexible and mobile study that would follow incidents and response as they emerged.

As an aid worker with ten years' experience in medical humanitarian interventions, I developed the research plan with the intent to capitalize on my background and connections. I aimed to access an institution and set of conditions that were, under normal circumstances, difficult for other anthropologists to enter. I hoped my emergency management experience would allow me to act as a participant observer of emergency management—to be present as members of a medical humanitarian institution came to grips with acute life-and-death crisis.

The study could have been undertaken in any one of several institutions, but to take full advantage of my professional network, my goal was to do the research with Médecins Sans Frontières—the institution where I spent most of my career—and specifically, the headquarters

office I was most familiar with: Operational Centre Amsterdam (MSF-OCA).⁸ This would enable me to capitalize on my existing network of past colleagues. While I was acutely aware my role as an anthropological observer would strain old friendships (see Mosse 2006 for an account of how far awry this can go), I hoped my research could also benefit the people I had worked beside for so long as an original and meaningful reflection on the humanitarian enterprise.

I approached the Medical Director of MSF-OCA in late 2012 with a research concept note that outlined the nature of the proposed study. I would later learn that medics and nutritionists within the organization were uncertain about the potential contribution the study would make to the institution. After some weeks consideration I was put in contact with Beverly Collin, one of the organization's health policy and research advisors. Based in the London office, Bev is a nurse practitioner, former field medical coordinator and a trained anthropologist. Following a long phone conversation to review the concept note, Bev was convinced of the potential value of the research and would become my key research contact within the organization. This would begin a ten-month process of protocol development before the study gained final operational and ethics approval by the organization.

After the protocol was accepted I would start work in the Amsterdam headquarters, with short research visits to the organization's offices in London and Paris. With the outbreak of South Sudan's hostilities, I would shift my field site there, first to the nation's capital in Juba and then to the rebel-controlled enclave of Leer. My research was interrupted by a one-month contract as MSF Emergency Coordinator in government-controlled Bentiu, then (as now) in the depths of a profound health and displacement crisis.

⁸ OCA is one of five MSF headquarters. The internal management and governance structure of MSF is complex; the institution's operational structures will be examined in greater detail later in the chapter.

This chapter outlines the practicalities of my research program and details the key people, sites and issues encountered over the course of the research. I give a brief organizational history of MSF, a short history of South Sudan and summarize MSF's organizational presence in the country. I do not attempt to give a comprehensive introduction to MSF, since the organization has been extensively theorized by others (Fox 1995; Terry 2002; Redfield 2005, 2006, 2008, 2010, 2013; Orkin 2010). Though I did fieldwork at MSF offices in other locations (Amsterdam, London and Paris) the majority of my time was spent in South Sudan; the organization's work there forms the focus of the analysis.

Médecins Sans Frontières

Médecins Sans Frontières is a complex transnational network of national headquarters, individual associates, field projects, research and advocacy initiatives. An aid organization that aims to combine (per its own rhetoric) the twin practices of emergency medical care and vocal advocacy for the affected, it has sought the public eye since its foundation in 1971.

MSF is emblematic of a particular brand of humanitarianism that combines an emphasis on rapid action, medical and logistical professionalism, media savvy, financial and political independence in response to crisis. Its emergency rhetoric—that human life in peril demands immediate response here and now, regardless of circumstance—gives the institution a powerful moral mandate and earns the esteem of many individual donors and citizens.

Much has been written about the origins, history and character of MSF. As always, the reality is far more complex than a short summary can portray. This section aims only to give a brief introduction to the organization—its origins and self-decided mandate—while I highlight other authors who have written more extensively on the group.

Mandate

Humanitarianism has become a central governing principle of our age (Fassin 2007:508-514; Barnett 2011:8). Key principles of humanitarian practice align with some of the dominant moral precepts of time: the sacred character of human life, the universality of human experience, the dignity of the individual, the ubiquity of suffering and the humane duty that each of us holds to attend to suffering according to our own means (Ticktin 2014:276). MSF is both a product and an engine of this dynamic.

Within this framework of humanitarian principles MSF cleaves to a narrower practice of humanitarian *action*, wherein virtue starts with presence and practice—doing something in the face of crisis (Redfield 2013:1). A lengthier account of anthropological approaches to humanitarianism is given in the literature review; for the purpose of this chapter it may be sufficient to take a definition of the mandate of humanitarian action from the organization itself. Nick de Torrenté, former executive director of MSF-USA gives a thumbnail sketch of the contemporary humanitarian worldview in the Harvard Human Rights Journal:

The most important principles of humanitarian action are humanity, which posits the conviction that all people have equal dignity by virtue of their membership in humanity, impartiality, which directs that assistance is provided based solely on need, without discrimination among recipients, neutrality, which stipulates that humanitarian organizations must refrain from taking part in hostilities or taking actions that advantage one side of the conflict over another, and independence, which is necessary to ensure that humanitarian action only serves the interests of war victims, and not political, religious or other agendas (de Torrenté 2004:4-6).

de Torrenté goes on to assert that these principles serve two purposes: the first ideological and the second practical. These declared universals—humanity, impartiality, neutrality and independence—are simultaneously moral arguments that people should not suffer and operational tools to ensure access to zones where suffering is acute (de Torrenté 2004:5).⁹

⁹ Because the concept of suffering appears to be a universal and comparative human category, it has been an object of fascination for anthropologists for several decades, although perhaps only recently made explicit (Ticktin 2014:276; Robbins 2013:448). Suffering as a moral category—and the moral worth of its alleviation—has deep ancestry in Euro-American thought. Redfield (2013:39-42) traces the emergence of suffering as a contemporary Euro-American concern.

Origins

MSF's creation story tells how a group of French doctors—medical veterans of the ICRC's response to the Biafran civil war—grew disillusioned with that institution's policy of strict neutrality, which they felt amounted to enforced public silence in the face of war crimes. In 1971 the French doctors joined forces with French medical journalists to form a new collective dedicated to the twin goals of rapid medical care for the dispossessed and public denunciation of their plight (Redfield 2013:37-39, 53-57; Barnett 2011:143-145).

Such a tidy account is not borne out in the historical record¹⁰, but the creation story highlights some of the salient events, tensions and public sentiments that led to the formation and rise of the agency. The institution got off to a shaky start. MSF's earliest interventions had little public health impact and could be characterized as media stunts. The militancy and media sensationalism of the organization's most charismatic founder, Bernard Kouchner¹¹ would clash with those who favoured a more medicalized interpretation of the organisation's role that included an aspect of medical confidentiality as a precondition to access (Barnett 2011:144-146; Taithe 2004:149-150). This tension between relief and reportage was present from the beginning and remains an inherent part of the organization today.

This unease between media advocacy and effective intervention found some detente in the French notion of *témoignage*, which is usually translated into English as “witnessing.” While the term has legalistic connotations, and has remained open to interpretation throughout the organization's history, it captures the idea of “being there”—presence in times of extremity as a moral witness (Redfield 2013:98-102). Application of the principle of *témoignage* varies with circumstance and personality, but the term captures some of the popular appeal of the MSF movement. “Being there” matters. *Témoignage* implies that private citizens (medics, in particular;

¹⁰ for a succinct history of MSF's creation see Barnett 2011:143-147. Also see Taithe 2004.

¹¹ a major public figure in France, later Foreign Minister for the Sarkozy government

already a morally elevated profession) could of their, own volition, travel to distant zones of human suffering—at personal risk and without hope of remuneration or fundamental change—for no reason other than a belief in the essential shared quality human life and presence in times of need. In situations of the greatest human insecurity sometimes the most that can be achieved is to be present as a “moral witness” to others’ suffering and death (Redfield 2013:98-123). These are morally pure, perhaps even naïve, aspirations. But they captured a public sentiment and ethical compunction deep within the Euro-American consciousness. As Barnett states, “MSF’s markedly rapid rise was a product of having the right kind of politics and the right kind of internationalist message at the right time.” (Barnett 2011:147)

From the late 1970s onward, MSF grew in public esteem. In an age of disillusion with government, MSF and NGOs like it were seen as citizens acting to highlight and amend the injustices of global power (Calhoun 2004:389-390). The moral message alone did not account for MSF’s success, however. Technology and technocracy played an essential role. MSF came of age at the precise moment when satellite communications, personal air travel and rapid maritime logistics became affordable; the organization had a winning chemistry of moral impulse, medical professionalism, fast global logistics, media savvy and a dose of rebellious French flair (Redfield 2013:71-75, 78-79, 88-90).

Redfield traces this institutional coming of age and characterizes his ethnography as *bildungsroman*, “the story of the sentimental education of a collective enterprise” (2013:2, also see 231-233). As the organization matured and gained a measure of solvency, internal disputes would drive Kouchner to leave the organization and his brand of media militancy would decline—though not entirely disappear (Barnett 2011:153-155; Taithe 2004:150). The brute reality of confrontation with powerful governments—often simultaneously the persecutors and

wardens of the very patients MSF sought to care for—along with changing characters and perceptions of aid led MSF to moderate its accusatory stance over the decades (Allié 2011:5-11).

Despite its contrarian stance, MSF's operational principles do not differ significantly from those of the ICRC (Barnett 2011:145). The organization advocates the central principles of neutrality, impartiality and independence. These are bolstered by a firm belief in human universality, medical ethics and the right to medical care. Despite (or because of) its “engaged refusal” of global politics, MSF is a purveyor of liberal values; it remains remarkably conservative in a classic sense, strictly hewing to long-established (characteristically French) definitions of rights and freedoms (Redfield 2013:44; Taithe 2006:155-156). In the words of Rony Brauman (next to Kouchner perhaps the most identifiable public persona of MSF), “we were the sons of a liberal democratic tradition” ... “we were neocons, but neocons of the 80s—without the religious dimension, without the militaristic dimension.” Members of MSF were “non-state actors” using action to gain legitimacy “... to mobilize or crystallize public discourse on certain issues.” (Pers. Interview, Paris, 21 January 2014). While medical care and *témoignage* could be ends in themselves, they were also a means to open discourse on broader issues of human government.

Structure

MSF's decentralized structure means it is perhaps more accurately characterized as a movement rather than an organization. The network is bewilderingly complex. Even senior members of the movement joke that they do not understand how it works.

The institution consists of five operational headquarters in major European cities and over 20 national headquarters in Europe, the Americas, Asia and Australia. Each national organization is managed by an operational executive, who reports to a board of directors who are themselves

drawn from and responsive to members of each national Association—an assembly of donors and members of the organization. In this way the structure of each national NGO roughly parallels that of a cooperative or publicly-held company—with the institution ostensibly responsive to the wishes of the member-shareholders, who (though assemblies and the representation of the board) chart the broad general direction of each national office. Day-to-day operations are the responsibility of the national management team. Each national headquarters acts as a focal point for publicity, representation and the recruitment of personnel and financial resources on a national scale. They may undertake other responsibilities too. So MSF-UK serves as a research and epidemiology hub for the movement while MSF-USA has a special focus on media activities.

National resources are then channelled into one of the five operational centres (themselves national offices) that oversee field operations. These five operational centres are Operational Centres Amsterdam (MSF-OCA), Barcelona (OCBa), Brussels (OCB) Geneva (OCG) and Paris (OCP). While they consult at a headquarters level, each operational section operates separately from every other section. At the operations level MSF is not democratic. It is strictly hierarchical, albeit decentralized. Countries or regional responsibilities are not divided between headquarters, rather every headquarters is free to explore and intervene where it chooses. This means that in a given country there may be one, two or up to five MSF sections present (with five Heads of Mission and five office locations—a bewildering arrangement for local authorities). In-country, the sections exhibit varying degrees of cooperation. There is friendship and also frequent rivalry—as individual sections may accuse others of slow or ineffective response, occasionally going so far as to poach skilled staff or intervene in the catchment region of another section. While this model is grossly inefficient from some perspectives, it is also highly distributed and competitive—attributes that may be of use in situations of emergency response.

In addition to the five operational centres there exist a number of regional MSF associations (MSF-East Africa, MSF-Southern Africa, MSF-South Asia, MSF-Latin America) and an International Association, which opens membership to any employee of MSF in a region without a national association. These associations, along with the home associations in the national offices, nominate members to attend the International General Assembly (IGA). The IGA is the annual general meeting of representatives from all MSF associations; this meeting mandates and charts the course for MSF-International.

MSF-International is a separate headquarters based in Geneva that is charged primarily with global representation and liaison with the highest levels of government, the UN and the aid system. Representatives of MSF International sit in Geneva, Brussels and New York and, though few in number, in their representations to governments they can act as a sort of MSF diplomatic corps. In addition to the public operational focus of MSF-International, the overall governance of the organization is overseen by an international board, which attempts to consolidate the various goings-on in national and operational sections to form coherent policy that reflects the overall direction and stewardship of the movement. This council is collaborative in function; it has very little say over day-to-day operational activities.

MSF's growth over the years led to the formation of several initiatives that are closely linked with MSF, often sharing goals and resources. Most prominently these include the Access Campaign (an MSF initiative to pressure pharmaceutical companies to commit to access to life-saving drugs for MSF programs and elsewhere), and the Drugs for Neglected Diseases Initiative (DNDi), an independent pharmaceutical research entity. Both organizations gained impetus from the prize monies and publicity that followed MSF's 1999 Nobel Peace Prize (DNDi:2015; MSF Access Campaign 2015; Redfield 2013:201-202).

The complexity of the organization gives some indication of its scale. The institution is one of the largest players in the humanitarian field, with annual income and expenditures that exceed one billion Euros (MSF 2015a:1-2). Globally in 2014 MSF gave 8,250,700 outpatient consultations, admitted 217,900 severely malnourished children to its nutrition programs and maintained over a quarter of a million people on drug therapy for HIV (MSF 2015b:9). While the numbers continually change, the movement employs around 36,000 people worldwide (MSF 2015b:91).

MSF and the Academy

MSF's public persona and its central place in the ideational canon of humanitarianism make it one of the more heavily theorized NGOs in the world. This is also due to the fact that many of the organization's founding members were themselves student activists and intellectuals in the radical political movements of the late 1960s and early 1970s.

Post-structuralism and contemporary French medical humanitarianism emerged from the same historical moment. The founders of MSF were both influenced by and influenced French thinkers such as Jean-Paul Sartre, Michel Foucault and Raymond Aron (Brauman, Pers Interview, Paris, 21 January 2014; Taithe 2006:149; Kouchner, 1985:85). 1968 Paris was not a large place; the philosophers and the medical activists ate at the same restaurants and attended the same rallies (Campbell, 1998:515; Kouchner, 1985:86; Traub, 2008). Indeed, Kouchner was friends with Foucault. After Kouchner's fallout with MSF, the philosopher backed Kouchner's new NGO, Médecins du Monde; Foucault attended board meetings and facilitated rallies and debates (Kouchner, 1985:86-87). According to Kouchner, Foucault went so far as to ask if he could "go

out on mission” with the organization¹², an ambition aborted by Foucault’s untimely death (Kouchner, 1985:89).

This engagement with prominent writers and theorists continues today. When I conducted interviews in MSF Paris I was intrigued to see Foucault’s *The Birth of the Clinic* on the bookshelf alongside books on protein-energy malnutrition. One can thumb the bibliography of a recent MSF publication to find—in addition to references to classic social theorists like Foucault, Bourdieu and Ferguson—citations of contemporary anthropological scholars of humanitarianism such as Fassin (Jézéquel 2009:16, 33; Crombé 2009:60), Ticktin (Jézéquel 2009:33) and Scheper-Hughes (Cooper 2009:162-163).

Bookshelves and bibliographies point towards the well-trodden path that runs between the aid world and the academy. The aid profession is also noted for its emphasis on self-critique; hybrid practitioner-intellectuals are relatively common in aid institutions, performing under the rubric of policy analysis or programs advisor (see, for example, practitioner-theorists Vaux 2001; Terry 2002; Orbinski 2009; Green 2012). Many practitioners take time away from the field to pursue a higher degree as a form of reflection on their experience. Thus—albeit sporadically and unpredictably—social theory finds its way to the decision-making tables in aid headquarters and field sites.

This exposition highlights a core and essential reflexivity in the anthropology of humanitarianism: critical academic theory of humanitarianism cannot be separated from the practice of humanitarian action. Many humanitarian practitioners read, write and contribute academic critique. Possibly more significant, key thinkers in the French existentialist and post-structuralist movements were present at the birth of many contemporary expressions of

¹² “Michel me demanda de partir en mission, pour deux ans au moins. Il me donna une date: la parution du IIe tome de L’Histoire de la sexualité après lequel il souhaitait une halte” (Kouchner, 1985:89).

humanitarian action (Redfield 2013:60; Taithe 2004:149; Campbell 1998:514-519). Foucault in particular is intimately implicated in the social movements that gave rise to French humanitarian organizations like MSF. His influence is impossible to separate from the conceptualization and practice of the French brand of humanitarian action. This makes for a predicament: critical theory is a tool for analysis of aid interventions themselves partly predicated on the same critical theories. To fully trace these intellectual threads is beyond the scope of this thesis since it would entail a genealogy (in the Foucaultian sense) of French intellectual history.

For the purpose of this work, it is important to recognize that analytical reflexivity forms an inescapable and essential property of all discourse about medical humanitarianism. Foucault's clinic is implicit in and almost taken for granted in both the analysis and practice of medical humanitarianism—an essential property of discourse on the subject. This is a kind of constitutive reflexivity that cannot be avoided, but should be acknowledged and can be brought into focus through a self-conscious reflection on one's own position as a participant observer. This means attention to the manner in which knowledge is a collaborative co-creation by anthropologist, ethnographic subject, readers and long-dead theorists (Ingold 2015:391-392; Watson 1987:29-30, 35). It is also an illustration of Robbin's thesis, mentioned earlier, on "the light of the great cultural problems by which anthropology views the world" (Robbins 2013:448): contemporary anthropological concerns reflect the concerns of a broader historical moment. We address shared concerns in different ways, but their essential constitution is social.

The next section introduces South Sudan, in particular my primary field sites in Juba and areas of Unity state. South Sudan is a place of central significance to MSF. Isolation, environment, politics and war combine to place the country's health among the poorest in the world; thus it is consistently the site of one of MSF's largest global interventions. Having maintained a continuous presence in South Sudan for over 25 years, through multiple conflicts

and crises, it is a place with a history for the organisation, one of the locations where the organization brought to maturity its practice of remote, technically sophisticated medical treatment.

A Short Introduction to South Sudan

The world's youngest nation, South Sudan was founded in 2011 after a decades-long civil war and negotiated cession from Sudan. From the time of Sudan's creation as a possession of the British Empire, South Sudanese protested against economic and political marginalization by successive governments in Khartoum. A protracted political and military struggle, bolstered by diplomatic support from the United States and other world powers, led to independence. Supporters of independence hoped South Sudan could build nationhood and prosperity with the aid of oil profits and international support. However, decades of war and isolation meant that infrastructure, education and public services were lacking, structures of power and governance were contested and old rivalries persisted. Since December 2013 and up to the time of writing South Sudan is embroiled in an armed civil conflict that has severely impacted citizens in many parts of the country and further debilitated the nation's fragile economy (de Waal 2014:347; Johnson 2003: 1-2).

The armed conflict has roots in political disagreement, however it has divided armed factions roughly along communal-ethnic lines, with the war widely perceived as a Dinka-Nuer conflict. As such it threatens to further polarize tribal identities within the nation. While the conflict has not directly impacted all states of South Sudan, it has slashed oil production and the optimism of independence; tens of thousands of South Sudanese have died as a result of the hostilities to date, and over a million have been displaced, primarily in the central states of Unity, Jonglei and Upper Nile. In 2014 the UN declared South Sudan a Level Three Emergency—the

most severe category of humanitarian emergency (Development Initiatives [DI] 2015). The country ranked first in the global Fragile States Index in 2014 and 2015 (DI 2015, The Fund for Peace 2015). Neither party to the conflict appears to have an overwhelming armed advantage. Political negotiation seems the only path to cessation of hostilities (International Crisis Group 2015:25; World Bank [WB] 2015).

A nation of 644,329 km², South Sudan encompasses over sixty separate indigenous groups, speaking approximately 80 different languages and dialects. The country's total population is uncertain but estimated to be around ten million people (WB 2015; International Food Policy Research Institute [IFPRI] 2014; African Development Bank [ADB] 2013:17, 21-22). The country lies entirely in the Nile Basin, bisected by the White Nile that runs south to north. The river is bracketed by a vast seasonal wetland that spreads across tens of thousands of square kilometres. This region, known as the Sudd, is home to much of the Nuer people; my field sites Leer and Bentiu sit near its heart. The Sudd plays a central role in many people's livelihoods. Cultivators and pastoralists follow the expansion and contraction of the Sudd's fertile grasslands as the White Nile's tributaries swell and recede in wet and dry seasons. Temperatures are very hot, particularly in the dry season. The population exploit wild flora and fauna to a limited degree—most commonly though fishing—but the bulk of the food economy is centred on agriculture and pastoralism (ADB 2013:109-110, 131-134, 146-148, 150).

Approximately 80% of South Sudan's population is rural. The vast majority engage in food production as their primary livelihood. Production is largely household-based and subsistence-focused. South Sudan remains a net importer of food (ADB 2013:131). Food production accounts for a relatively small proportion of national product: the economy is overwhelmingly reliant on oil revenues. Where the combined contribution to Gross Domestic Product (GDP) of agriculture, fisheries and forestry is estimated at 15% of GDP, oil production accounted for up

to 80% of GDP and 98% of the government budget prior to 2012 (WB 2015). The World Bank estimates that the conflict in 2014 cost up to 15% of 2014 GDP, while oil production was cut 20%. Coupled with a worldwide drop in oil prices, this thrust the nation into a deficit of US\$ 1.5 billion or 10% of total GDP (WB 2015). Overseas development assistance is also a major factor in the economy. Where 2012 South Sudan government revenues totalled US\$ 3.6 billion, multilateral peacekeeping expenditures totalled US\$ one billion and the country received US\$ 895 million in humanitarian aid. The United Nations' (UN) 2014 Crisis Response Plan solicited US\$ 1.8 billion to address humanitarian needs. Food aid accounts for the largest percentage of aid expenditure (DI 2015). In sum, despite immense natural wealth and abundant foreign assistance, South Sudan remains crippled from decades of war. Trenchant political rivalries, petroleum dependency, unresponsive government structures and a public that lacks access to basic education, health care and mechanisms of government are just a few of the problems that confront the nation (de Waal 2014:347-349).

Pastoralism and Food Production

Small-scale agriculture and pastoralism are the fabric of social structure in South Sudan. They are also a response to adverse environmental and political conditions. For many peoples of South Sudan, most famously the Dinka and Nuer, who make up the country's two largest ethnic groups, pastoralism structures life: wealth and prestige are reckoned in livestock; marriages and alliances are cemented with cattle exchange (Evans-Pritchard 1940:16-50; 1956:248). These systems have persisted through time because—in the presence of abundant natural forage and the absence of monetary institutions—livestock serve as both a store of value and a food source: a self-replicating, low-maintenance investment that delivers both sustenance and prestige (Evans-Pritchard 1940:19, 51, 55-57). In the wake of war, where livelihoods and even fixed residence are uncertain, household-based, short-term production of cattle and crops are a

functional adaptation to crisis. At certain places and times humanitarian aid can also figure prominently in household food calculations (Paul et al. 2014).

While small-scale household production provides some buffer to political and climatic constraints, it remains vulnerable to shocks and at times is unsustainable (Paul et al. 2014). Yet, in the absence of prolonged peace and infrastructural development, these livelihoods are unlikely to change significantly. Subsistence agriculture and pastoralism will almost certainly remain the dominant forms of production; agricultural surpluses will remain small and commercial production will not be realistic in many parts of South Sudan (ADB 2013:135-138, 165-166).

Nutrition and Health

Precarious food production results in marginal health and nutritional indicators in the population. South Sudan's health indicators are among the poorest in the world. While infant mortality (102 per 1000) and under-5 mortality rates (135 per 1000) hover around the already-high averages for sub-Saharan Africa, maternal mortality stands at 2054 per 100,000 live births, more than double the sub-Saharan average of 921 per 100,000. Nutrition and anthropometric data is patchy, but analysis indicates that under-five stunting sits around 31% while wasting affects 23% of children under five years old (IFPRI 2014). Children tend to be the focus of feeding programs and thus are better represented in the anthropometric data. There is less statistical insight on the nutritional status of the adult population. This is particularly problematic in regard to women of childbearing age, since women's nutrition is often compromised in favour of the welfare of children and men. In times of scarcity children might be given preferential treatment at household mealtimes, while women usually put themselves (or are placed) last in the household food calculations, eating the smallest portions and being the first to cut back (Paul et al. 2014).

The Nuer People and Experiences of 2014

In South Sudan I spent considerable time in Juba, Leer and Bentiu. Juba is a multi-ethnic city, populated by members of all South Sudan's ethnicities as well as large numbers of expatriates, in particular from neighbouring nations such as Kenya, Uganda, Ethiopia and Eritrea. The majority of expatriates work in the fields of aid, diplomacy, petroleum, construction, transport or service industries such as supermarkets, restaurants and hotels. In its cosmopolitanism Juba is like any other capital city in sub-Saharan Africa. In contrast, Leer and Bentiu are majority Nuer areas within Unity state. The staff, patients and interlocutors of MSF in those places were for the most part Nuer people. Thus, naturally, the majority of my South Sudanese informants were Nuer. This section briefly highlights some aspects of Nuer life, history and sociality of immediate relevance to this study.

The approximately three months I lived in Nuerland was short by anthropological standards, and my interactions with people comparatively superficial as a result. Additionally, based on clinical ethics for human research, a clause in my MSF research agreement put restrictions on the degree to which I could interact with patients and caretakers. Thus, when I interacted with patients and caretakers I always attempted to do so through the mediation of the MSF medical staff. Regrettably, in this ethnography the subaltern does not speak—at least, not in so many words (Spivak 1988:271-271).

My short stay does not qualify me to give commentary or insight on the Nuer people, in particular since a number of classic anthropological monographs deal at length and in detail with Nuer cosmology, conceptions of the self and society, politics, livelihoods, ritual and religion (Evans-Pritchard 1940, 1949, 1951, 1954, 1956; Hutchinson 1996). These ethnographies, and other first-hand accounts (Vandevort 1968) gave me a rich introduction to the people and place.

However, while classic monographs can serve as a reference, it is also important to reflect on how recent events have affected the Nuer people.

In regards to the crises that unfolded in Leer and Bentiu, in many ways I am guilty of the same “disaster tourism” that Alex de Waal roundly accused aid agencies of. de Waal charged that short-term presence and a pre-configured disposition to view daily life through the lens of emergency led to superficial readings of local conditions and prefigured declarations of mass destitution and famine (de Waal 1989:21-23). From certain perspectives, this is exactly what I did—I arrived at the tail-end of mass displacement and trauma, with little exposure to the long evolution that led to these events. My presence was short-term and narrow in focus. I cannot refute such charges categorically but only argue that my anthropological training forewarned me of the pitfalls (I traveled to South Sudan with de Waal’s book in my backpack), I prepared carefully, I was present for longer than many other aid representatives and I had competent guides along the way. As to the risk of reading acute crisis where none exists, or subverting subaltern perspectives: aspects of the local situation were, by all accounts, unprecedented in sixty years of civil war; people who were in Leer in the early months of 2014—aid workers and local residents alike—will almost to a person say much the same thing: the local region teetered on the brink of famine, famine was averted and it was the combined (though not coordinated) strategies of aid agencies and local people that averted it.

South Sudan’s civil conflict has split the country largely along ethno-political lines of Dinka versus Nuer. The ethnic split is not perfect or predictable. There are Nuer on the side of the government in Juba. There maybe Dinka who fight with the rebel opposition. Sub-groups and politics within the Nuer have frequently been at odds; opportunistic politicians and generals who head regional sub-groups may take their constituency in different directions, depending on the winds of war (ICG 2015:7-8). Old rivalries and short-term profit can matter as much as

perceptions of ethnic loyalty. Tribalism and tribal politics are still very much alive in South Sudan (de Waal 2014:348-349). While the rebel opposition is a majority Nuer constituency, divisions within the greater Nuer community have meant that leaders of several prominent factions have sided with the government in the present conflict (ICG 2015:9). Nevertheless, in the places where I worked the local Nuer population saw the government as the oppressor, feared them and fled from them. This fear was well-justified. Events stemming from the December 2013 conflict led to a spiral of violence. There are documented instances of atrocities committed by both sides, often against civilians of other ethnicities (ICG 2015:10-11, 16-18).

During the course of my stay in South Sudan, Bentiu shifted hands between the opposition and the government. When I was in Bentiu it was held by the government. Where the small city had once been lively trade centre it was now ghost town, peopled only by soldiers and their unhappy camp followers. Many of the buildings were burnt shells and those that had not been burnt were ransacked; the only vehicles that transited streets were army technicals—camouflaged LandCruisers mounted with heavy machine guns; they whipped down the road at dangerous speed with armed, aggressive youths hanging off at all angles. More youths lounged at checkpoints, kiosks and impromptu bars. Some were in questionable states of sobriety. The boys wore a patchwork of civilian and military clothes; almost all carried a Kalashnikov. Occasional shots were fired here and there, at nothing in particular.

Many of the expat Somali and Darfuri traders, who ran much of the town's trade, had earlier been slaughtered; the survivors had fled. The resident urban population, fearing for their safety, had themselves fled either far into the bush—towards traditional homelands—or into the protection of the United Nations compound in Bentiu. An estimated 40,000 people lived in a mud field behind a chain link fence. There had been no services initially; no food distribution, no clinic, no trenches for drainage or excreting. The UN base had headquartered a development

mission, unprepared to serve as a camp for displaced persons; staff were not emergency workers, but political affairs specialists, technicians, human rights and military monitors. They were overwhelmed. The aid agencies arrived within days or weeks but struggled to meet demands. The adult population endured, but under five mortality quickly passed emergency thresholds. Children died daily in the MSF facility. At enormous personal risk women from the local population left the safety of camp to gather firewood, trade with soldiers, or carry supplies to relatives hiding in the bush. The MSF medics said the women had all suffered sexual violence, but none of them ever talked about it or sought aftercare. There were different “neighbourhoods” in the site, built up over time and successive influxes of people. While the majority of the residents at the site were Nuer people, the oldest block on site—separate from the others—held Dinka and other ethnicities: those who had fled from fear when the rebels controlled the town. They were housed at a distance, to limit the possibility of inter-ethnic violence and retribution; thus the country’s dynamics were played out in miniature on the grounds of a UN base. These would be the circumstances that called for me to suspend my research. For one month, until a replacement arrived, I led the MSF response in Bentiu. I then transited to Leer to join the teams there in the observer’s role.

Compared to Bentiu, at the time of my visit Leer was idyllic. This calm was illusory. The population had only recently returned from their own flight to the bush and twin spectres of starvation and conflict loomed. Giant aid planes circled overhead. With each pass they air-dropped tons of basic commodities. As the dry season (“the fighting season”) drew closer forced recruitment began. Leer was controlled by the opposition. Therefore both my own work, and that of MSF, transitioned between rebel-controlled and government-controlled areas. Equal access to all civilian parties in war was a fundamental principle of humanitarian law, and aid flights flew freely between the capital and rebel-controlled territory, but not without scrutiny or

power-plays from militaries on both sides of the conflict. The negotiation to ensure supplies reached their intended recipients never ended.

Leer region was, to all intents and purposes, an enclave—hedged on all borders by inhospitable groups or terrain. The seasonal flood waters cut it off from the main roads and bogged heavy vehicles, so for a period of months, which corresponded with the growing season, people in Leer had a reasonable hope that the conflict would not reach their doorstep. This allowed them to get a crop out of the ground and, buffered by the airborne food drops that flew almost daily, stave off acute hunger for that time. The cattle herds that are the heart of Nuer life were hidden in cattle camps deep in the bush; their approximate number and location were closely guarded secrets, kept from the aid workers and even neighbours: a strategic asset of war.

As is well-documented (Evans-Pritchard 1940, Hutchinson 1996), in Nuerland cattle are a cornerstone of family nutrition. In addition to meat, milk and manure, healthy cattle might occasionally be bled and their blood mixed with milk to form a nutrient-rich beverage (see Evans-Pritchard 1940:27-28) (this practice appears to vary in frequency and acceptability from region to region). Similarly, cattle urine and ash are mixed with milk to make a fermented yoghurt-like product with extended shelf-life, while curds may be processed into cheese for longer term-storage. (see Evans-Pritchard 1940:23-24). From very rough household surveys I conducted, the number of household cattle correlated strongly with the health status not only of a household, but often of neighbours, who might share cattle products.¹³

In the time after my departure the conflict did not abate. The risk of mass starvation, which had diminished, re-emerged in 2015. The government recaptured Leer in the dry season

¹³ For the classic anthropological introduction to the Nuer and their cattle, see Evans-Pritchard 1940:16-50. For a reflection on Evans-Pritchard, a consideration of how cash and cattle economies interact, and how conflict has impacted on a “classic” anthropological people, see Hutchinson 1996:56-101.

of 2015 and the town's Nuer residents again fled to the swamps. By late 2015, large numbers of people from many parts of Nuerland hid in remote islands in the Sudd, surviving off wild foods and what supplies could be ferried from neutral territories by night (Littlejohn-Carrillo 2015; Patinkin 2015). While recent peace agreements hold some hope for a return to normalcy, for many famine looms again this year and long-term stability seems out of reach (Nield 2015). At present I am uncertain of the whereabouts and wellbeing of many of my informants from that time.

My Résumé

When I proposed the study to MSF in 2012 my institutional credentials as a member of the MSF movement were well established. I graduated from undergraduate anthropology in the late 1990s, then worked several years in my native Canada with small, development-focused non-profit organizations. My first posting with an international aid organization was with *Action Contre la Faim* (*Action Against Hunger* or ACF) in Gulu, Uganda for most of 2001. I joined MSF in 2003 and worked in field postings for the next six years as a Logistician, Project Coordinator and Deputy Head of Mission in East and West Africa, Colombia and Pakistan.

From 2009 to 2010 I returned to university to pursue a master's qualification in medical anthropology at Oxford. This mid-career pause—time away from emergencies to reflect and pursue academic or professional certification—is a typical moment on the career path of many aid professionals; a very large number of my colleagues took similar time away to obtain qualifications in public health, tropical medicine management or logistic studies. Like many of them, I returned to MSF after my master's degree.

From late 2010 until the start of 2012, I was Head of Mission (the senior MSF representative in-country) for MSF's intervention in northwest Nigeria. This time in Nigeria would prove to be one of my greater professional challenges. To illustrate the full nature of my role and responsibilities: the intervention consisted of three separate projects in separate states, including an unprecedented response to acute mass lead poisoning—to date the largest identified mass lead poisoning in contemporary medical history. Such a landmark event made the program and my role highly public; my position included considerable interaction with media and governmental authorities at the gubernatorial, ministerial and ambassadorial level. The scale of MSF's Nigeria presence was considerable by emergency standards; I oversaw a staff that varied between 400 and 500 individuals, depending on the level of emergency response. The intervention's annual budget approached (and would eventually pass) 13 million Euros. At the height of our 2010 cholera intervention (just a few weeks after my arrival, as I was coming to grips with the job) I was stunned to calculate that the intervention spent roughly 70,000 Euros a day to staff 1,200 cholera beds and move 30 medical teams across an intervention site roughly the size of England.

While Nigeria represented my greatest overall responsibility in sheer weight of numbers (both in terms of personnel and finances), in previous years I managed programs of arguably greater delicacy, complexity and insecurity in places like Pakistan, Colombia and Somalia.

My résumé helped position me in relation to other aid workers, in particular, those MSF colleagues who acted as gatekeepers and facilitators for the research. I was regarded as a person of considerable experience, though far from extraordinary. I was not among the most seasoned professionals—those career humanitarian workers of 25 or more years' experience—but my roughly ten years in the field put me in a senior tier among aid professionals. My authenticity,

credibility and insider status were established in advance of the research. This had implications for my position as a researcher, both ethically and practically.

Participant versus Observer: Concerns for Focus, Objectivity and Neutrality

An early academic critic of my study proposal objected to feasibility of the plan: an aid worker he insisted, would not be able to resist the pull of emergency. I would become embroiled in response to the detriment of research.

His concern appeared reasonable. Almost by definition, crisis calls for “all hands on deck”. Twin demands are at play: the rational need to mobilize all available resources is one facet, while the emotional pull is another. Human crisis—in particular starvation, visibly manifest through physical wasting—is emotive. Confronted by mass destitution or extreme hunger, many researchers might feel moved to put down the notebook and “do something,” to address the immediate situation. Compassion for others’ suffering may be a key factor that draws people into research in the first instance (Robbins 2013:448; Farmer 2009:188-189; Scheper-Hughes 1995:419-420). Thus compassion might lead one to suspend research in favour of more immediately practical impact.

My critic’s concern, however, was based in popular perceptions of emergency. In practice, there were several factors that made participant observation in crisis situations possible. Responses to complex emergency by established institutions are largely template-based (Redfield 2008:147-149, 157-161; Revet 2013:39, 50-51). In the face of chaos, interventions are made predictable by necessity—to cope with uncertainty there are rituals, rhythms and routines. Responders’ roles and responsibilities must be clearly defined and adhered to. I would not enter a vacuum to be pulled in any direction. Rather, my presence was a question of pre-defining a

purpose and role within the institution then making space within an emergency response that was already adequately being addressed.

This pre-definition was made explicit in the research protocol and agreement I drafted with MSF and in discussions with key managers at each level of the hierarchy. As it happened, I did take up the role of aid manager for a brief period of one month during the fieldwork. Yet this possibility was accounted for in the research protocol, with a clearly delineated procedure for agreement of MSF and the Institute of Social and Cultural Anthropology at Oxford. There was a rapid round of consultations when the request occurred, my intervention was agreed to be a short-term arrangement to cover a gap in staffing; I was put on a contract for a fixed period, when my replacement arrived that contract ended on time and I resumed my duties as an anthropologist. The experience greatly enriched the present ethnography, as I gained new insight and appreciation for the dimensions of the conflict. Properly managed, my dual role was a strength, not a weakness.

In fairness to my critic, early scepticism over the project's feasibility was not limited to academics. Midway through my field research a senior MSF informant confided with a sheepish smile that she had phrased her initial scepticism more colourfully. On first reading my proposal her response (which she dramatized with comic gestures) was "He's going to do what?! Is he crazy!? Is he actually fucking crazy?!" My informant's jokey admission I took as a kind of apology, as she told me the research seemed to be progressing well. Unfortunately, despite my asking, she never told me which specific part of the methods proposal prompted her outburst.

The reason I highlight these adverse reactions from both academics and aid professionals is to note that while some concerns were general they could be addressed through shared management of a clear protocol. With the following section, I will outline the process and

protocol that I followed. Drawing on the experience and expertise both of MSF and the university, this process demonstrates that research in an emergency setting is feasible if carried out with the structure and assistance of a strong research framework that accounts for concerns of institutions and individuals.

Projected Research Sites and Timeline

The research was planned and budgeted to take place across at least three locations (the aid agency headquarters, the capital coordination office and the field base) over a period of approximately one year; this would permit exposure to one annual agricultural cycle and hunger gap. By observing events from three different locations at different times it was hoped that I could parse at least three different perspectives—and their similarities and differences of interpretation.

Over the course of the study I spent time in MSF offices in London, Amsterdam, Paris, Juba, Leer and Bentiu. My study began in early November, a few weeks after my hoped-for October start due to the already-mentioned delays in finalizing the protocol. I began with a number of informal interviews in the London office before flying to Amsterdam, where I would spend the next four months (broken by brief trips to Paris and Oxford), from November to late February. By late February it was clear that I would travel to South Sudan, and I left Amsterdam for a two-week stopover in Oxford to prepare for the next leg of the fieldwork. I would be in South Sudan from March to September, most of that time in Juba, with one month in Bentiu and six weeks in Leer.

The month in Bentiu was operational. Faced with a desperate situation MSF asked to put me on contract as the country's emergency coordinator. A mass displacement led 40,000 people to

sit in a UN camp without clean water or sanitation. I was to travel there to take over the MSF response to the situation. I headed up MSF's emergency operation for a month before my replacement arrived, after which I resumed my anthropological duties. The time spent in Bentiu was intensive and deeply moving on a personal level, but due to the extremity of the crisis, the ethics of conducting participant observation in a UN camp and obvious time constraints, I made no official field notes from the period. I did, however, keep a personal diary, to document personal reflections, key events and conversations; some of those reflections will be featured in the thesis.

The study began at the MSF-OCA headquarters in Amsterdam where actual and potential humanitarian crises are tracked globally in multiple regions. This phase of the study focused on the practices, techniques and international mechanisms that attempt to understand early warnings of mass malnutrition. The trigger for the next phase would come from this project surveillance, as the large-scale food crises of 2014 began to emerge.

It is important to emphasize that, at the start of the study, I did not know which country I would go to. Because crisis is by nature emergent and unpredictable, the study framework was designed to incorporate the choice of the crisis location as a part of the research itself. The pathway for this decision-making process was written into the research agreement with MSF, structured as a collaborative endeavour between me, key managers and the field teams.

Thus the research began in early November 2014 in the Amsterdam headquarters with final decision on the field research site planned to be made in consultation with headquarters support and project teams midway through the research timeframe (i.e. about the three month mark). The site chosen would be deemed to balance key factors of high acuity and feasibility (from the perspective of access, personal and organizational security as well as team and government

permissions). When a certain crisis came to the foreground as more acute and more feasible than others, the research planned to move to the MSF country office, where the team attempts to pinpoint nutritional crisis on a national or regional scale, and the field project, where the daily work of monitoring, surveillance and treatment is carried out at the local level.

This timeline and framework were executed very much to plan, though the final field location of South Sudan came as something of a surprise. Around August 2013 (harvest time in much of Sub-Saharan Africa), and well before the start of the research, weather and conflicts in Chad and the Central African Republic had already pushed these two nations into practitioner consciousness as potential hunger hotspots in 2014. They would remain the countries of my primary concern for the coming months, along with Syria. The surprise eruption of hostilities in South Sudan on 15 December 2013 did not immediately trigger warnings of food crises; at that time the nature and extent of the fighting was unclear. Through late December and all of January, as fighting spread—along with reports of mass displacement, atrocities, looting and destruction of property—the possibility of localized food crisis entered MSF’s general consciousness. By February of 2014 widespread, eminent food shortage—and even the potential for famine—were foremost concerns.

South Sudan met the criteria for acuity. It would also prove to be the most feasible of project sites. Since South Sudan was the largest of MSF-OCA’s missions it boasted a large operational carrying capacity that could accommodate my presence without any noticeable disruption. It was also a country well-accustomed to the presence of international researchers, and so my presence would raise no significant concerns among staff, authorities or the populace. Finally, the agency’s in-country chief—the Head of Mission—was himself a former academic and very sympathetic to the needs and aims of research in emergencies. He opened the door for the study, provided

material support and a very welcome degree of personal and institutional transparency. Thus by early March of 2014 I was on a plane to Nairobi, then onward to Juba.

With Bentiu as the obvious exception, most of my field research was spent peaceably seated in offices and, later, in hospital wards. I conducted interviews, wrote observations and typed notes. I spent a good deal of time working on research administration—the essentials of organizing interviews, data archives, visas and ethics approvals. At a casual glance I was indistinguishable from other desk-dwelling denizens of the MSF site—those people who run the machinery of any aid agency apparatus (while the public faces of MSF, fresh or flinty, belong to the field medics—desk-workers outnumber medics by a large ratio). I was happy to blend in.

Figure 1: Fieldwork Chronology

My Fieldsites	London> Amsterdam	Amsterdam> Oxford> Amsterdam	Amsterdam> Brussels> Paris> Amsterdam	Amsterdam> Oxford> London> Nairobi (Visa:1 week)	Nairobi> Juba	Juba	Juba	Juba> Leer> Juba	Bentiu	Leer	Leer> Juba> Depart S.Sudan
Month	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14
S.Sudan Conflict Timeline		Start of S.Sudan Conflict. Fighting spreads rapidly to Jonglei, Unity and Upper Nile.	Population flees Leer, MSF evacuates. Intermittent ceasfires.	Leer Hospital is destroyed (7Jan/early Feb) UN declares Level 3 Emergency.	End of the dry season (fighting season)	Population starts to return to Leer; Bentiu Massacre; start of the wet season (growing season).	MSF returns to Leer	Intermittent peace talks/conflict	Intermittent peace talks/conflict	Intermittent peace talks. Harvest season	End of harvest season

Study Design

MSF conducts in-house research (primarily observational and epidemiological studies) to support medical field operations. Research in MSF is planned and conducted in line with the norms of clinical and public health research. The medical research model places heavy emphasis on the research protocol as the foundational and guiding document of any research process. A protocol exists, primarily to ensure the welfare of the study participants, second to ensure the integrity of the research process and the quality of the data, and third to ensure the integrity of the medico-scientific enterprise as a whole. This first duty, of beneficence in research, is

particularly relevant given that most MSF research is conducted among vulnerable subjects, such as in times of mass conflict or disaster (Schopper et al. 2015:1-2; Tansey et al. 2010:1534-1535).

In pursuit of a uniform process and standard for field research, in 2001 MSF established an external Ethics Review Board or ERB (Schopper et al. 2009:1). Peopled by a variety of specialists, the ERB acts as a centralized apparatus to ensure ethical due diligence in field research, linked to but independent from the institution itself. In principle, all MSF operational research conducted under the umbrella of the organization should function with a protocol that has been reviewed and approved by the ERB.

In line with this procedure, after the provisional acceptance of my research concept note in late 2012, the next step was to draft the research proposal into a workable research protocol for review by MSF's ERB. This process would take considerably longer than I anticipated. Before the protocol entered ERB review the process of drafting and revising the document, in cooperation with my research contacts at MSF, took approximately nine months. Once the document had been submitted to the ERB the final approval of the protocol, with minor revisions and clarifications, took a further six weeks, achieving final approval in late October 2013 (Stellmach 2013).

This would not be the end of the ethics process, however. One of the stipulations of the protocol review was that I should seek local ethics approval in my destination country. In South Sudan this was not a straightforward process, but one I duly undertook upon my arrival. The absence of functioning government research structures in the country meant I would need to seek an informal approval through a protocol reading by local academics and, in Leer, discussion with members of the community.

Thus over the course of my field study I pursued three different ethics clearance processes: Oxford's ethics approval through the Central University Research Ethics Committee (CUREC); review through the MSF ERB and the local ethics clearance process within South Sudan. Each process sought to address ethical and methodological concerns unique to a specific constituency. Each process ensured (to a degree) that I had the support and approval of those constituencies within my study: the university and professional anthropologists, aid workers and medical researchers and South Sudanese people themselves.

Of the three processes, the CUREC process was the shortest and most straightforward. CUREC was a divisional ethics approval framework for fieldwork among human subjects. It sought evidence of a feasible, safe and well-thought out research program, while simultaneously recognizing the at times improvisational process of anthropological fieldwork. Since my participant observation would be conducted in an institutional framework, primarily among "elites" (aid workers, as opposed to aid recipients) and not interfere directly with the health and wellbeing of my subjects I was eligible for the expedited review (CUREC 1) and the committee was quick in its response. The time from application to approval took less than a month.

The CUREC document (a short narrative and checklist) would contrast sharply with the MSF protocol document, which ran to 30 pages with annexes and took most of a year to draft. This MSF process was also expedited, and the document spent around six weeks in front of the ERB. It was the process of protocol development—getting it ready for ERB—that took the bulk of the time. Unlike the CUREC document, the MSF research protocol was a study roadmap that, in addition to detailing ethical considerations, outlined the purpose, objectives methods and anticipated benefits of the work.

The differing weight placed upon these two institutional processes was telling. CUREC focused only on ethical due diligence, leaving the nuts and bolts of objectives and methods to the academic supervision process. MSF, on the other hand, actively assessed feasibility and made stipulations or suggestions on multiple aspects of the planned study. For example, the ERB expected explicit policies for participant consent, data management and a disclosure procedure should I observe malpractice. Project outcomes and potential benefits were weighed against risk. The MSF ethics process was similar to a project proposal or major application for institutional research funding (which, effectively, it was: a request for research sponsorship). Thus the concept and role of “ethics review” expanded to a wider scrutiny of project feasibility; the protocol became the project’s central referent document. The practice implied that, to be ethical in an emergency setting, research should impose a minimal burden on host populations and the institution alike. The MSF process was exacting but, once completed, it conferred a greater degree of legitimacy on the research, particularly among members of the institution itself.

The third process, ethics review within South Sudan, was difficult to obtain, since there were no functioning research ethics committees in the country. Ultimately, an informal in-country review was facilitated by a South Sudanese academic who agreed to read through and comment upon the protocol. This review helped to situate the research within the local context, in particular, to highlight local sensitivities. These sensitivities were of two kinds in South Sudan: sensitivities of local communities, who often experienced research fatigue (they saw few practical impacts from their participation in a limitless stream of interviews, surveys and questionnaires) and sensitivities of the national security services, who viewed researchers with suspicion—as potential spies or reporters who could compromise national security. Fortunately—since my study was primarily focused on MSF as an institution—my work did not aggravate either of these sensitivities.

In line with the university's guidelines on data management (<http://researchdata.ox.ac.uk> [accessed 18 April 2016]) and MSF's own expectations I drafted and signed a research agreement with MSF; the core purpose of this document was to define data ownership. MSF-OCA's research policy held that any data produced under the aegis of the organization was the property of the organization. Physical storage and copyright would revert to the organization at the end of the study—where the materials would be deposited in research archives for use in future studies. This clashed with anthropological research ethics, which would assert that the researcher holds intellectual property rights over the material they produced, and with the university's own ability to claim (albeit rarely in anthropology) partial rights to products of research conducted under its auspices (<http://www.admin.ox.ac.uk/researchsupport/ip> [accessed 18 April 2016]).

I proposed a solution to this dilemma that split the materials into three separate data sets:

1. A primary dataset that consisted of primary and secondary source material including in-house and external reports (“grey literature”), interview transcripts and email pertaining to the study;
2. A secondary dataset consisting of my electronic field notes and codebook;
3. A tertiary dataset that included my personal diary, reflections and jottings.

At the end of the study, rights to and possession of the first set would revert in whole to MSF. I would retain rights to the second set, but transfer copies to MSF to reuse and redistribute for a period of five years and in line with good research ethics and practice. The third data set—my private papers—remained my own—though reflections from my personal diary do enter the analysis here.

Funding

The research was sponsored under a three-year Commonwealth Doctoral Scholarship from the Commonwealth Scholarship Commission in the UK. The scholarship included a stipend for six months of field research and a flight reimbursement. For the duration of the three-years, the scholarship covered the costs of tuition, which included access to the university's scholarly resources (expert advice, libraries, journal subscriptions, databases). While in Europe I covered all expenses from this stipend, including rent, transport and cost of living.

For the South Sudan portion of the research, MSF facilitated a flight and most in-field expenses and administrative support. This arrangement was identical to the existing MSF precedent for support to voluntary researchers. I was on an unpaid consultancy contract. It included medical and evacuation insurance, transport, accommodation and a food allowance. Both parties preferred this arrangement, since it decreased administration (my status was no different from any other member of expatriate staff) and risk of disruption to the research (I was incorporated into operational and security planning). The arrangement was deemed not to present a conflict of interest for the research or the organization since, under the terms of the research contract, I had no direct programmatic involvement or responsibility for decision-making. For my one-month stint as Emergency Coordinator in Bentiu I changed status; I was placed on a paid contract, with management responsibilities. At the end of this period, I reverted to my old contract as a voluntary, unpaid researcher.

Observation and Interview Techniques

Participant observation was the primary research method. The observation was planned—and occurred—in three phases: beginning at the level of the MSF headquarters, then moving to an MSF country office in a crisis-affected country and finally moving to an MSF project site

within that country. The particular focus of the observation was on meetings, discussions and care practices where acute hunger was conceptualized, monitored, and treated.

In addition to participant observation—and in keeping with expectations of my informants, who anticipated that I would enact the role of researcher—I conducted a series of formal interviews. These were both unstructured (opportunistic) and semi-structured interviews. The semi-structured interviews were scheduled but participant-led, flexible, open-format interviews based on general topics with a formal question guideline. While I would have preferred to gather my data in a less rigid, less ritualized setting, scheduled sit-down interviews were necessary at times: reserved for the busiest senior managers, who did not have the time to chat on the fly or after work. At the urging of MSF, these interviews were audio recorded and transcribed in full; the transcripts and their use rights were turned over to the MSF research archives for use in future projects.

Interviews and interactions only formed a part of my field notes. Much of my data came from direct observation: continuous and consensual monitoring of organizational practices such as administrative processes, weight-for-height measurement or data-entry. In the headquarters and country office I would change desks and departments every two to three weeks to gain an impression of activity in each sphere of the organization. In Amsterdam I sat for an extended period at the Emergency Support Desk—the hub of OCA's emergency response activities—before moving to a desk in the medical department. In addition to these obvious locations I sat variously in the human resources, finance and media departments. This gave me a broad exposure to people and issues. Aware of my purpose, members of each department would often converse with me to learn more about the project. Some would highlight events they thought would be of interest while others would ask for my thoughts on departmental issues.

Despite this broad exposure to the various departments and interactions, by necessity I focused my study on medical and operational interpretations of crisis. This work has not investigated how MSF frames emergency in legal terms (through the framework in International Humanitarian Law), in the media or in relations among other agencies or governments. I do also not directly undertaken analysis of MSF's *témoignage*—how numbers and experiences feed into public narratives of crisis—(though others have taken this up in past [Redfield 2006:3; 2013:98-123]). Similarly, the thesis largely ignores the emergency logistics and finance that make the entire intervention possible. All of these practices are central aspects of MSF operations; they form additional registers of understanding, value and concern that contribute to the knowledge and definition of circumstances—but on all of them can be represented equally in the narrative.

In each location I introduced the study in several ways. Immediately on arrival I would post the research note for participants (see Annex) and I would arrange to give general presentations to the staff on the nature and character of my presence. In the Amsterdam headquarters, where I began my research, I arranged for the project to be featured on the intranet news banner, a web-based scrolling headline on every office computer. I put the project documents on the shared file server in a web-based wiki format, including project information and “Frequently Asked Questions”. This allowed viewers to click and read only the areas of the study that interested them and find answers to specific questions. The “byte-sized” information format was designed to be accessible, familiar and easily digestible—a style that suited the fast-moving pace of an emergency organization. I could easily refer employees to the site in conversation.¹⁴

¹⁴ Together with the office intranet manager I monitored the amount of traffic at the internal site. Perhaps not surprisingly, the total volume of visits was low, indicating few people took an active or exploratory interest in the study. But the site fulfilled its purpose: within the office it ensured a relatively high profile for the work, along with ready and transparent access to the project purpose and means: a measure of ethical due diligence impossible in more remote field sites.

In addition to posting written materials, in each of the three study locations I gave one or more verbal presentations soon after arrival. The verbal presentations introduced me as the anthropologist and familiarized the community with the aims of the study. The presentations varied in length and nuance, depending on the audience.

The research was conducted almost exclusively in English, the operational language of the MSF movement. I occasionally drew upon my Spanish and limited French. During my time in Leer I studied some Nuer (N'aath) with the help of MSF local staff—my efforts formed a popular and amusing pastime for everyone involved. I became somewhat proficient in greetings and compliments (Nuer salutations have a complex etiquette) but I never managed to achieve conversational fluency.

Because descriptive anthropological accounts of emergency situations are scarce, I reckoned that detailed narrative accounts could be one of the more immediate contributions my thesis could make to the discipline. Thus in my field notes and the ethnographic narrative here, I focus as much as possible on long-form, detailed description and direct quotes from participants. My intent was to capture in detail the events and mood of the moment, and wherever possible, to portray it in participants' own words.

My focus on direct quotations served several purposes. First, obviously, to represent the participants in their own voices. Further, to reflect multiple voices; to convey the words and thus the perspectives of many actors in a given situation, not just those in key positions of authority. Participant voices lend authenticity, multiplicity, immediacy and a succinct clarity to the account. A participant's terse turn of phrase can substitute for a paragraph of prolix explanation. Finally, I realized that my own background both enabled and potentially biased the study—as my

personal reading of events could overwrite those of other participants. The participants own words are a partial antidote to this problem.

To this end I carried a notebook everywhere and attempted to record specific statements and turns of phrase at the moment or within at most a couple of minutes of their utterance. This was not an obtrusive technique in this context; MSF people are used to reporters and their jottings. I would often preface my scribbling with a query like “that’s an interesting thought, do you mind if I write it down?”; no one ever refused and no one seemed bothered by my notebook. It helped to situate my research as reportage. In addition to my informal interviews and situational notes I conducted 23 recorded interviews, varying in length from 45 minutes to an hour and a half. These interviews were transcribed in full and are the source of some of the lengthier quotations in this thesis.

As a stylistic convention, quotes from individuals are in “double quotation marks”. These are the speaker’s own words, quoted directly. Many passages in my narrative imitate the language and style of the speaker, without using quotation marks. These passages are taken directly from my field notes, recorded at the moment, which captured the keywords, content and cadence of speech, if not always the exact phrasing. While these passages reflect the individual’s choice of words and their style of speech they are not denoted as direct quotations and should not be considered such.

Chapter Three: The Office

On Saturday evening, I close the door of my apartment in the Buitenveldert and walk to the station at Amsterdam Zuid. I am traveling. I will attend an academic workshop and see to some visa matters in London. I arrive in the UK and take a bus to Oxford. I walk to my college; it's near midnight. A student friend, away for the holidays, has left keys to his flat in his college pigeon hole. I let myself in, make up the bed and go directly to sleep.

15 December 2013 is a Sunday. I write some emails and catch up on field notes, then take the rest of the day off. It's cloudy and chill, but good to be back in Oxford. It's very quiet at the holidays. I enjoy a walk in the Wolfson Meads, send a photo of the winter meadows to my wife, then buy a few groceries from Marks and Spencer. I cook supper in the dormitory kitchen. Fighting breaks out in the Juba barracks. I sleep early. On Monday morning I read about Juba in the news. Then I attend the workshop and, later, a meeting with Stanley, my doctoral supervisor.

I have been a participant observer in MSF's Amsterdam office for nine weeks. In my current role, the Juba fighting is a minor concern. I take note, but don't worry much. Nor would most MSF people if their work was not directly implicated. Outbursts of violence are common in proximity to MSF projects. Individual projects take these outbreaks seriously; they pose a very real danger for individuals and the institution, but there is also a routine to them. The response is well-practiced: the MSF teams bunker down and shift their hospitals into alert. They ready staff and supplies to respond as need and opportunity arise. They might evacuate or they might attempt to move closer to the fighting; it depends on the circumstance and the managers in charge—the read of the situation. The capital coordination team move personnel and supplies around the country as the situation evolves. The HQ operational managers—already on-call 24-

hours a day—will be extra vigilant; they rearrange priorities and schedules to provide extra capacity if needed. In most MSF contexts, sporadic fighting of this kind runs for minutes, hours or days before the situation stabilizes into an uneasy calm. Life resumes its daily pace and medical activities continue. It is a practiced rhythm in some MSF projects globally, in places where bloodshed ebbs and surges in semi-predictable patterns.

Unknown to me, this explosive violence is not routine for South Sudan (at least it had not been routine in 2013), and it is unheard of in Juba. But I had never worked in the Sudans; I knew little about their politics. South Sudan sits further down my list of likely research sites: a country at peace; politically and economically unstable, but with few indications of acute food crisis in 2014. I follow neighbouring Chad and Central African Republic (CAR) with much closer interest. In those nations, climate, politics and conflict had collided to menace mass hunger.

This chapter gives an account of how emergency is declared in practice. It follows office-based practitioners as they come to know and define crisis. This section looks at individual interactions in crisis and, in particular, the interaction between people and numbers that forms an institutional definition of emergency. As outlined in the first chapter, a state of emergency may be a response to external events, but the characterization as “emergency” depends on collective recognition. This chapter examines in some detail how that collective characterization unfolds. It argues that action is compositional, in the Latourian sense (Latour: 1987:25-29): reflexive, collaborative, provisional and iterative; a social process that is constantly in process.

In agency fundraising materials and other public representations disaster is assayed by *sortie*. Aid workers enter danger zones by LandCruiser or helicopter, shout urgent messages through walkie talkies and treat patients on the fly. These evaluations (rapid exploratory assessments or “explos” in the MSF language) are indeed key to the constitution of emergency, but are rarely so

dramatic and represent a proportionately small part of the collective effort. Most of the characterization work is done in offices and meeting rooms, on calculators and spreadsheets. Members of the institution try to make sense of events through reports and numbers represented in maps, graphs and discussion. Their action is not punctual, in the sense that it does not happen at a fixed point in time. Rather the action is durative, a continual, constitutive process through time.

At a cursory glance, MSF's meeting room discussions might be indistinguishable from office meetings in any number of industries anywhere in the world. The organization uses jargon, management techniques, software and office furniture typical of large corporate institutions. Top managers juggle crisis management with quotidian administration. In addition to medical and operation forums, they attend lengthy meetings to discuss staffing, finance, technology or office layout.¹⁵ This chapter explores senior, office-based managers in their roles as decision-makers in emergency; it seeks to document sense-making activities in action.

Outbreak

On Wednesday 18 December, still professionally distant from what might be happening in Juba, I return on the night train from London to Amsterdam. I am back in the MSF office on Thursday morning. Nothing has changed, nothing seems amiss. A few people mention South Sudan and members of the country's headquarters desk sit in deep meetings, but that is normal. I settle in at one of the spare workstations at the open-plan Emergency Support Desk (the ESD

¹⁵ Despite the banality of office life, for many, the activity has a sense of purpose, even urgency. It was common for people—whether they worked in fundraising, administration, the cafeteria or the medical department—to express a belief that their work at MSF transformed otherwise routine labour into a contribution to a greater good. Against the background of office administration, functionaries believe the moral stakes to be different. A future research project might explore these beliefs more fully.

or, more commonly, “E-Desk”), the organization’s quick response team that specializes in dealing with the opening moments of mass crisis.

Around four pm, I hear sharp footfalls in the hallway. I recognize the step of my old friend and colleague, Konstantin.¹⁶ A foul-mouthed, ebullient workaholic, Konstantin is a popular character in the office. As an émigré from the former Soviet Union, he abandoned a promising scientific career for MSF. He is one of OCA’s top logistics chiefs and includes South Sudan in his portfolio. We worked closely together with MSF in Pakistan; I consider him a close friend.

With a nod to me, Konstantin strides into the E-Desk and straight to Lisbeth, the deputy manager. In low voices the two discuss emergency supply for 60 seconds. They conclude and Konstantin turns to proclaim laughingly to the whole E-Desk, in his thick Slavic accent, “Nice Christmas present from South Sudan...! Always! Bastards! Why could they not start on January 5th? ... We just got our drugs there and now the customs is closed!” Lisbeth looks at him quizzically, “So the coup d’état failed?”, she inquires. “No,” Konstantin shakes his head, “.... different versions”. It’s not clear what happened. The two fall back into quiet conversation. For three minutes Konstantin updates Lisbeth on what he understands of the events and politics, then strides out of the E-Desk with more jovial remarks and humorous complaints.

I note this short exchange in my notebook without really knowing why. It seems significant. As it happens, it would be the first of hundreds of field notes on the subject of the South Sudanese war. In the space of days, South Sudan notches up my list of potential field sites. This was not a flare-up but a conflagration; while the nutritional ingress I sought was not yet present, it was clear this was a seminal moment both for the country and the MSF mission there.

¹⁶ Except in the case of senior officials who agreed to be quoted directly, all names in the thesis are pseudonyms.

What the government portrayed as a failed coup d'état to many accounts was violence with little premeditation; in the tinder-dry rivalries of the Juba barracks soldiers erupted into fighting. The violence spreads just as spontaneously, from Juba to Bor and beyond, a muddy melee, as rivalries, tensions and personal hatreds between generals, among soldiers and, in some places, among everyday people play out along the barrel of a gun.

What caused the spark is not certain, but the reasons for the rapid ignition and spread of military violence are clear. Alex de Waal details the underlying causes in a recent article (de Waal 2014). Declining oil revenues made the government insolvent. According to de Waal, in the years since South Sudanese independence, the governing Sudanese People's Liberation Movement (SPLM) failed to develop its structure much beyond that of a rebel army; despite the window dressing of party democracy, the SPLM remains a coalition of military chiefs, largely representing regional and ethnic constituencies. These government and military elite depend upon "political patronage" in the form of government rents; as their fortunes declined along with oil revenues, so did their loyalty to the cause of a united South Sudan. Splits may occur for political and financial reasons, but because military leaders represent a regional or tribal subgroup, the effects play out along ethnic lines. This deepens rifts of ethnic animosity (de Waal 2014: 347-349, 358-359, 361-362).

Most of what happens to MSF in the opening of the conflict—the arrival of wounded, team's high-tension moments in bunkers and during evacuations, negotiation at checkpoints, the transfer of medical supplies in the midst of fighting—I let pass unobserved. In HQ the discussions are held behind glass doors, a few key people present; I did not want to hover around with a notebook. Had I been so bold as to insinuate myself, the bosses would have been entirely right to send me outside. I would be another stressor on top of too many.

Instead, I spend the rest of the week sitting at the E-Desk. Since South Sudan is a well-established mission under another operational desk, E-Desk support is not called for at this time. But that does not mean the holiday season is quiet. The E-Desk is managing emergency interventions in the Philippines (post-typhoon), Syria and CAR, in addition to providing support to other locations. I follow the team's moves on Syria and CAR closely—Syria for its emerging, anomalous infant malnutrition caused by lack of formula milk and CAR as a high-potential location for the second half of my fieldwork. There is plenty to do. I type up notes, listen to the desk chatter and conduct interviews. Still, every hour or so I stand and carry my cup to the coffee machine, so I can peer to the other side of the open-plan office, towards the glass doors of the South Sudan cell. In their corner of the office there are always two or more people in deep conference, often huddled around a speaker phone.

Occasionally, the Operational Manager (OM) for South Sudan emerges. The OM is the chief headquarters manager for South Sudan; he is responsible for the integrity and safety of the people and program as a whole, along with several other mission countries in his portfolio. Daniel had been a friend and colleague for many years. We grew up in MSF together, working on the same teams in Somalia and Pakistan. I know him well and watch him now in what must be one of his most fraught moments. Beleaguered, at times bewildered, he paces the corridor, fixated on his smart phone. He reads and types and runs his hand through his hair. That hand through the hair is a nervous habit. He does it in stressful situations when he needs to think. In past, I learned to judge roughly how complex a situation was by the number and duration of hair swipes. Now, as Daniel stares at his phone, he puts his hand in his hair and holds it there for a long time.

The remainder of Thursday and most of Friday morning pass in this way. I am not the only one to take an interest in the management of the crisis. Others keep tabs too: the people at

the E-Desk, the medics from the Public Health Department, the technical specialists in logistics and media communications. We gather what information we can about the situation, in a less direct manner. There are regular operational updates by mail and in meetings, questions in the corridor and conversations at the coffee machine—anyone with potential stakes and interest learns the basics, in-between the rush of other duties. People like Lisbeth follow developments at a distance because they could be asked to lend support at any moment.

That moment comes on Friday, five days after the fighting began. I pass the Operational Manager, my friend Daniel, in the corridor. He turns to ask if I might be interested to attend an emergency meeting on South Sudan. It might be useful for your research, he says, because we have to make some key decisions in the near future that will affect the intervention in the long run. I tell him I am very happy to join.

The meeting is crowded. We pack into a small conference room on the 4th floor. The South Sudan headquarters team are all there—the Operations Advisor, Health Advisor, Human Resources, Admin, Communications. Konstantin from logistics. The advocacy specialist. From the emergency desk, there is Lisbeth and her boss, Arne. Daniel's boss is here too, the Deputy Director of Operations. And in the corner sits a venerable field person: Jock, a briny, off-colour Logistics Coordinator who spent most of his 20 years with MSF in South Sudan. There are a dozen of us in total, roughly equal numbers of men and women, mostly white and mostly European. The air is taut, it holds a certain trepidation. Contrary to the norm, there are few greetings or jokes; what remarks are ventured meet a muted response.

Daniel begins. He states that he's called this large meeting to discuss short-term futures in South Sudan. There will be no context updates—you can get that outside this room, he says—but the situation is very bad and the assumption is it will get worse. "This is a key moment we'll

look back on and say ‘we could have or should have...’” therefore this meeting is to analyze the situation and discuss where MSF should be positioning for the near future.

Daniel outlines the rough plan for the coming days. The key priority, from his perspective, is to stabilize the existing projects—to do what is possible to ensure staff safety and continue medical care. Beyond that, MSF should look at what needs might be elsewhere. Juba, he says, is not a priority. Despite being the original flashpoint there are plenty of other NGOs there and it is on the doorstep of the UN. Other sections of MSF are active there too.

Daniel asks if this remit is clear. Arne, the head of the E-Desk, is impatient. “Let’s just get on with the equations.”

The opening round of discussion frames the situation in terms of risks versus benefits. The risk of presence (and numbers of staff) present in existing project locations—is weighed against their ability to carry out meaningful medical work. The discussion circles back to Juba. Many staff were evacuated; much of the operation is now run from Lokichokio, an aid centre on the Kenyan side of the border. Juba is staffed only by a skeleton team. Is this team enough? Is it too little or too large? The unmet humanitarian needs in Juba are low by comparison with other places, because there are many aid actors present. Yet on the other hand, Juba may be a future flashpoint.

The same calculus holds for many sites around the country. The team names actual and potential hotspots: Juba, Bor, Akobe, Malakal, Lankien, Leer, Nasir, Pibor, Gogriell...

Everywhere there is a large army battalion is a potential flashpoint: the mixed ethnicity of the battalions, Nuer and Dinka, mean that tensions can spill into violence without warning. This was the pattern in Juba and Bor (it will happen in the future in Bentiu). The team expects the border

between Dinka and Nuer territories will be key flash points, whereas the homelands will be safer.¹⁷

The discussion dwells in analysis until Arne, impatient asks an important question: “how do flash points transform into humanitarian need?” Daniel answers, the flash points will have immediate medical needs, in terms of clash response for war wounded, but perhaps the greater issue will be mass displacement—which can occur with very little warning. This is a key challenge from a response perspective. “I anticipate displacement, but I don’t necessarily anticipate displacement to somewhere [specific].”

Lisbeth chips in, directing the conversation to still-more practical questions, “Of the current projects what do we see as essential activities and what as non-essential?” Daniel—an engineer by training, not a clinician—refers to his Health Advisor—the group’s senior medic. Corinne is another 20-year veteran of the organization, and has known South Sudan for almost as long. She gives an update on the medical activities. The teams have shifted to essential activities only. In most places this means re-enforcing focus on inpatients and on patients with long-standing communicable diseases like Kala-azar¹⁸ and Tuberculosis (TB). In South Sudan these diseases can reach epidemic proportions if not kept in check. The teams have stopped outreach in Leer, to focus activities on the Inpatient Department (IPD) and TB. In Nasir, they continue with normal programs, which are centred in IPD. Activities in the Outpatient Department (OPD) were in the process of handover to the local Ministry of Health. This handover may be frustrated by the current conflict. Malakal project only does Kala-azar. They have 16 beds but now are facing emergent concerns over a Hepatitis E outbreak. In Maban there is IPD.

¹⁷ With the burning of Leer, this turned out to be a wrong assumption.

¹⁸ Visceral leishmaniasis; see the glossary.

A reduction to essential services and staffing presents its own problems—it reduces capacity and flexibility to respond. Jock expresses concern that the conflict dynamics are still not apparent. “It’s not 100% clear it’s a Dinka/Nuer thing.” It could go in any number of directions, he says, ethnic or political. This makes it very difficult to predict where the key flash points will be and what exactly might be the needs.

Corinne insists that the focus remain on emergency Kala-azar and surgical programs. The two surgical locations (Lankien and Leer) are best situated to respond. Arne asks if preparations are in place to transport surgical capacity to other locations. “The inflatable is in Nairobi,” says Daniel, referring to the MSF inflatable surgical hospital that can be flown globally and be operational within 48 hours. They considered pre-positioning the inflatable somewhere in South Sudan, but thought better of it. It’s ready to go, though. If need be it can be erected in a third location and teams can move from the surgical locations in Lankien and Leer to staff it. Alternately, the organisation can form a separate surgical team and put it on standby for deployment.

The meeting continues in this vein. The group discusses what needs might be emergent and where the agency can have the most impact. The obvious new location to attempt to open is Bor. It has a strong potential for further fighting and humanitarian consequences. MSF has been there before so have some recognition and knowledge of who we are. In the programmatic dimension, surgical needs will reduce once the fighting abates, but then the public health dangers associated with mass displacement will increase. Nutrition will not be a first priority to respond to in this emergency, but it will come in March and April. The team also discusses which projects might be closed if capacity is needed elsewhere or if danger becomes overwhelming.

The discussion shifts to technical hurdles. Konstantin raises the issue that E-Prep—the emergency preparedness stock of medicine and equipment—is in a poor state. The stock is in the process of being replenished after a previous emergency. The ability of MSF to evacuate its staff in a timely manner is also of concern. Staff that could be evacuated to Lokichokio or elsewhere were evacuated. Those that remain in South Sudan are considered essential. On this day MSF has 16 expats and 100 regional and inpat staff in-country.¹⁹ This is too many to evacuate all at once, considering that a typical MSF plane might carry a maximum of 14 people and there might be only two to five planes available at any time. There is a shadow administration of these staff every evening; who they are and where they are is written on whiteboards in Juba and Lokichokio. Each member of the team accounted for and their whereabouts known in case of evacuation or other urgency. And these are only the non-local staff—the ones that MSF must evacuate in emergency. The local staff number several hundred more (being residents of that locality, MSF does not evacuate them). Despite drastic reductions in staff numbers and activities, this is still an unruly number to keep track of during open fighting.

Daniel starts to draw the meeting to a close. There is not much update on press and advocacy communications, on the media side of activities, the team continues to make press releases, to get their activities on record. There are no big statements or declarations planned. The team in Juba will continue to engage with the United Nations to encourage them to take up their responsibilities. Other actors have limited capacity at this time; in terms of other MSF headquarters: OCB has many problems in Pibor; OCBa are in several locations—there is a large “MSF footprint” covering many places in the country. Daniel concludes that, as the existing projects continue to be consolidated, he would like to look more at the needs and possibilities

¹⁹ See the glossary for definitions of the categories of staff. For an insightful reflection on NGOs’ legal categories of staff and how these reflect and reinforce moral and subject/object distinctions among human beings in theory regarded as equal, see Fassin 2007.

for intervention in Bor. However, they must keep an eye open it see if anything is missed elsewhere. The key challenge is to maintain knowledge and awareness as the situation changes.

Arne pipes up, and brings the meeting full circle, back to the point where the discussion started. “At the end of this discussion I’m left with the concern that—if we’re missing something—it might be Juba.” Juba can deteriorate quickly he says, so why pull the team out? Arne pushes Daniel to put more people in Juba to be ready to respond there. Daniel refuses. Juba is crowded with international actors—there are many people who can respond in event of emergency there. He would rather commit resources to places further afield, where fewer actors can reach: places like Bor. Arne feels a skeleton team in Juba may be a mistake. He makes a public challenge: “As an aid worker, ... [in times like this,] your instinct is to move forward,” says Arne, not retreat or give up footholds. The room is silent. Daniel regards Arne for a moment, then replies, “Yes. And I prioritize moving forward in Bor.” Arne shrugs and glances away. He defers. It is Daniel’s call at this point. “And what do you need from us[, the E-Desk]?” Arne asks. “HR” says Daniel, Human Resources. We can spot and relocate strong talent from within the mission or it can come from E-Desk. Strong people, managed through a single line under the South Sudan desk.

For the moment, Daniel has fended off the tacit question: should the E-Desk take over part or all of South Sudan operations. For the moment, this is fine by Arne and Lisbeth. Their desk is busy and their teams are committed elsewhere. But the question always arises when a crisis deepens: can the existing team handle it or should management pass to the Emergency Desk? On one hand, the whole of MSF is an emergency organisation—every operations desk is well-practiced in crisis management. They are in country long-term, they know the networks, context and teams better. On the other hand, the E-Desk manages fewer projects with a more intense focus and simplified procedures. The shift of a mission to the E-Desk is a significant

social invocation of emergency within the organisation. They use their cachet to cut red tape and ramrod supplies and personnel into place. “An emergency manager,” Arne told me, “is a person who finds the quickest solution that works.” E-Desk people have a certain mindset: a practical, short-term focus, a willingness to be confrontational and a bias for action. The scope and duration of their presence is limited, however. Committing the E-Desk to one emergency today means it is not available for the emergency that may occur tomorrow on the other side of the world. Their intervention is kept short as possible.

The team agrees to adjourn this meeting for coffee and continue after—to go through the Human Resources in detail. This will mean the HR staff and key advisors only—the other members of the team can get back to their work. I thank Daniel and, though I might be welcome at the HR meeting, I don’t ask to attend, in favour of typing up my notes from this meeting as quickly as possible.

The destruction of Leer is still a month away. When it happens, the shock and dismay at headquarters are palpable; even with the multiple daily reviews and analyses, all the permutations and calculations, the burning of a hospital seemed a distant possibility. Yet by the time I left Amsterdam for South Sudan, the resolve to continue engagement with Leer was already made, part of the stance of MSF. Though in ruins, Leer hospital would not be triaged out of MSF’s calculations.

The Practice of Emergency in MSF

The nature, extent or severity of crisis is rarely apparent. Even as it comes into focus, life goes on. Routine necessities might recede into the background, but must still be attended to. The office exists to—among other things—manage these necessities. The office also plays a central

role in the MSF definition of emergency. One may confront the biological and political consequences of crisis most squarely in a bunker or at a patient bedside, but cause and effect are made sense of in offices. Various offices at the project, capital and headquarters level each assist to translate the lived experience of war, starvation and other extremes into the social practice of emergency. The narrative brings into focus some key aspects of MSF's emergency practice.

Networks and Multiplicity

One fundamental feature of MSF is immediately apparent: there is an awful lot going on at the same time. This is true, not only for the headquarters but also for individual country missions and projects—where multiple, complex medical activities (basic healthcare, surgery, treatment for HIV or TB) occur alongside major activities in transport, logistics and personnel management in addition to delicate negotiations with government or military powers. This complicated arrangement means it is doubtful that any one person fully understands all of the projects, activities and initiatives that happen in MSF-OCA, let alone in the MSF movement as a whole.

This presents a coordination problem. As one headquarters informant told me, there are a lot of bright people in MSF, but there could be a crisis unfolding on the other side of the hallway and you would never know it—the volume and pace of activity is such that it narrows people's focus. Every activity that goes on in the office is somehow critical, she said, yet individuals are only aware of a tiny piece—despite all the bulletins and update meetings. This is true even for those highly experienced managers in central coordination roles.

This situation of partial knowledge and limited individual control is characteristic of large institutions (Graeber 2012:199-120). MSF differs from many large organizations in that it eschews efforts to maintain strictly linear hierarchies and flows of information (the kind

associated with the classic “pyramid” of the organizational chart) (Mintzberg and Van der Heyden 1999:87, 92). This may stem partly from the character of the people, their training and the nature of the situations the organization confronts; emergency management is in large measure improvisational.

MSF conceives of itself as a highly decentralized organization that puts a premium on rapid, independent thought and action. The assumption—if not always the reality—is of a system predicated on competency and autonomy. While there is a clear hierarchy, it is comparatively flat and diffuse; authority for certain decisions and activities is vested in specialist advisors and service departments.²⁰ Hierarchical authority is generally wielded lightly—decisions are consultative and even collaborative. There are exceptions, most notably in the areas of medical decision-making and security management—spheres that often need rapid, unilateral calls. Yet even in these areas, where time permits, managers frequently go to pains to ensure people with a stake are consulted. This concern for collaborative engagement may be an expression of the universalist, democratic ethos of humanitarian action—where all lives are equally worthy of consideration—but it is made in the face of administrative structures that by nature demand centralized authority. This tension—between human lives that are universally equal in theory yet patently unequal in practice—is manifest throughout the organization and a key theme I will return to throughout the thesis.

Technical Expertise and Distributed Authority

Just as MSF’s centres of activity are multiple, so is management within those activities. Overall, MSF’s management structure is a network of interlinked semi-autonomous technical experts revolving around several parallel lines of authority (medical, operational and

²⁰ For a comprehensive, though now slightly dated, case study of the decision-making structure of the MSF Amsterdam headquarters, see Heyse 2007:63-72.

administrative)—experts come together to focus on specific issues under the management of a single central administrator—in this case, Daniel, the Operational Manager.

As illustrated in the ethnography, each MSF headquarters has a department of operations that divides functions among a number of operational cells (also referred to as desks or portfolios). While the exact structure varies from headquarters to headquarters, the operational cells each consist of relevant expert advisors—health, logistics, human resources, communications to name a few—under the overall leadership of a single chief, in OCA termed Operational Managers. Each cell is responsible for the oversight and management of several country missions. This management structure is replicated at the country level, where the Head of Mission (HoM) is the overall responsible for several regional projects, supported by a Medical Coordinator (MedCo), Logistic Coordinator (LogCo) and others. It is again replicated in each project, under the management of a Project Coordinator (PC).

There are five operational desks in OCA headquarters. They are compartmentalized, given a large latitude of independence, but integrated into the larger operations platform through a joint meeting of Operational Managers under the leadership of the Director of Operations, one of the most senior figures within OCA.

The structure and function of operations within MSF-OCA are a frequent source of tension. While it is nowhere stated so bluntly, in the day-to-day life of the institution, Operations is effectively the chief department: the hub responsible for planning and implementation of the organization's core medical humanitarian activities. As such decisions and priorities of Operations (along with those of its smaller sister department, the E-Desk; the rapid response team) often carry weight and urgency that can overrule planning and priorities in other departments (including the medical department). This is emphatically not to say that other

departments or directors are irrelevant. The board, General Director, Medical Director and Director of Resources and their respective offices each have influence and carry out functions essential to the organization—but these activities tend to be primarily strategic, managerial or in direct support to operations. Thus the daily rhythm of the office is in large part response to the priorities of the operational and emergency desks, themselves, in theory, beholden to the priorities of the field.

A contributor to this tension is the fact that the large majority of managers within the operations department are not medically trained. Rather, they come from a variety of professional and technical backgrounds. All are well-versed in public health and medical administration, but few have any formal medical training. This is an artefact of necessity: a practical constraint rather than an institutional choice. Despite (or because of) the strongly medical character of MSF, the number of medical positions to be filled often outnumbers the number of medics available. Since there is usually a dearth of medical personnel, medical people may incline towards medical positions, which can only be staffed by trained personnel (i.e. specialist medical roles). Positions that would benefit strongly from medical perspective but that can conceivably be staffed by non-medical personnel are generally staffed by career humanitarians with little medical background. Thus of five Operational Managers within OCA at the time of writing (2015-2016), only one is a clinical medic.

This medical/non-medical dynamic in MSF—a construct largely of necessity—contributes to one of the institution's central, self-identified tensions: between those who view emergency primarily through (in the words of MSF people) a “medical” lens and those who view it through a “humanitarian” lens. Phrased another way, this is a tension between people who consider it the primary humanitarian duty to save life (and so count lives saved) versus those who consider the primary humanitarian duty to be one of presence and accompaniment—acknowledgement of

suffering and personhood in the face of extremity. Most workers try to strike a balance between the two. This dual definition of humanitarianism is acknowledged and held in tension in all MSF's programs; at different moments appeals to one or the other aspect may justify a program. A high-acuity program, with a large clinical turnover can generally be justified on the basis of numbers alone. A cholera epidemic response needs little rationale outside of clinical numbers. Other programs cannot point to a demonstrable, verifiable number of lives saved (mental health programs are one such example) and may be justified on the basis of humanitarian presence—the invisible effect of care and attention in times of trauma (Han 2012:26). This split perception between biological life and personhood, and how it can or cannot be made legible to the institution, will be explored further in Chapters Five and Six.

Corridor-based Decisions and Error

In a meeting of MSF nutritionists I gave a brief presentation of my research and solicited their reactions. The discussion coalesced around just how much the creation of knowledge relies on interpersonal activity and how much that activity takes place in informal venues—important decisions can be made between two senior managers in the corridor. This was a frustration for the participants, because they felt their advice as experts was not listened to—while formal meetings gave a show of consultation and collaboration, many decisions were pre-ordained. One of my key informants in the meeting remarks that, yes we all know that many discussions and decisions happen in the corridor, but “I only realized after talking to Darryl” how very many “information sites” there are and “how fluid it is.”

“An emergency cannot be found in the corridor!” a Spanish nutritionist piped up, half in frustration, half in laughter. But it happens. Despite all the checks and balances, early warning-systems and data analysis, some nonchalant remark can trigger an intervention. She went on to describe a situation in a meeting many years ago, when, as a part of a routine update from the

projects, ops casually presented numbers of such and such a percentage. The medical and nutritional advisors reacted with shock, asked for clarification, and on the spot determined that emergency thresholds of malnutrition had been passed in the project without anyone's awareness.

MSF's systems of hierarchy and knowledge-organization may appear diffuse, but they are part of a highly integrated network. While seemingly effective much of the time, the network is not always purposeful or predictable; no invisible hand guides the course of an intervention. This is problematic, because MSF's organisational structure and the fast-moving environment it works in means that it may be easy for critical bits of information or critical insights to pass unnoticed. A non-medic in a leadership role may be partly in the dark on medical issues. Similarly, a medic may miss the importance of a financial constraint or political factor (for example, the cost of airlifting medical supplies or the complex web of government and social perceptions around a given illness or course of action).

Given the manifold opportunities for error, the system is structured to put medical and non-medical professionals in close cooperative contact to reinforce a collaborative reading of the situation. While the compromise works, much of the time, it is still a source of tension for members of the institution. This highlights an important aspect of institutional knowledge: no individual is an independent arbiter of crisis. Accounts of emergency are a collective achievement.

MSF as Bureaucracy

An account of MSF's headquarters activity differs considerably from MSF's self-representations and media portrayals; far from the bedside, the corporate—and corporatized—character of knowledge and decision-making becomes more evident. This is not to say that

individual perspectives and leadership are impossible, but that they occur within the structure of a professionalized hierarchy and a collective classification of value (Douglas 1986:91-93). How this collective, institutional practice of classification plays out is of interest.

MSF has always been leery of administration. Bernard Kouchner affected outrage at MSF's growing institutionalism; it was perhaps the key factor that led to his stormy exit from the group (Redfield 2013:60). Yet even MSF's earliest and most simply-stated ambitions—independent medical action across political divides—could only be achieved through institutionalism: collective action through shared structures of meaning, organization and administration. Any collective enterprise has some degree of administration; more so for a motivated, rationalist enterprise that engages in technical intervention in and across nation-states.

Collective administration finds its apogee in bureaucracy: a rationalist, rule-driven technology intended to achieve collective goals at scale. In the history of the MSF movement, from its activist roots to the present, we see Weber's adage at play: "when those subject to bureaucratic control seek to escape the influence of the existing bureaucratic apparatus, this is normally possible only by creating an organization of their own which is equally subject to bureaucratization." (Weber 1978:224)

Bureaucracy has often been maligned as the embodiment of modernity's every negative aspect (Graeber 2012:108-112). But as outlined in the literature review, Bear and Mathur recently called for a new direction in the anthropology of complex administrative institutions that accounts for the manner in which public aspirations can be encoded in bureaucracy. This, they argue, "is precisely what characterizes bureaucracies as opposed to other institutions of modernity. Their legitimacy rests on claims that they manifest a constitutional agreement and exist for the public good." (Bear and Mathur 2015:18).

From this perspective, bureaucracy is an organizational technology for realizing certain collective goals; aspirations for the public good are encoded in the charter and mechanisms of public administration (Bear and Mathur 2015:18-21). Systems of management, investigation, hierarchy, measurement, classification, standards and protocols are systems for bringing rationalized, collective action to bear. That bureaucratic aspirations rarely work as intended—and that people contest how they are realized—should be a focus of anthropology, because it reveals how people conceive of and enact the good (Bear and Mathur 2015:19).

MSF might be considered a bureaucratic institution in the classic, Weberian sense: an agency where activities run along a protocol-driven, routinized system, governed by a meritocratic hierarchy of specialists granted authority by virtue of their systems expertise (Weber 1978:956-958). Given its medical and technical character, the institution is perhaps more accurately characterized as a form of technocracy: a bureaucracy that derives authority from and governs through expertise in applied scientific knowledge (Riles 2004:392).

Whether framed as a bureaucracy or a technocracy, the notion clashes with MSF's self image. When the topic comes up in conversation, my MSF informants frequently condemn internal bureaucracy—even though they themselves are technocratic functionaries within that structure—then launch into a personal account of some recent experience with the institution's bureaucratic folly.

Much of the internal MSF-OCA bureaucracy, informants point out, arises as a necessary response to external bureaucracy. The organization deals with multiple and increasingly complex regimes of visas, taxation, import, export and employment regulations. It recruits medics, lab scientists, pharmacists, and technicians from around the world—so it needs to arrange contracts,

visas, salary payments and pensions in a coordinated manner, and also verify qualifications from a plethora of medical, nursing, midwifery and technical councils. It deals with so many international flights that the organization has its own travel agency—incorporated as a separate entity—on the ground floor of the MSF Amsterdam office. Thus it is reasonable to argue that the bureaucratic aspects of MSF are not innate to the organization's character, but proportionate responses to external attempts to impose bureaucratic governance.

This point of view would seem to be supported by several aspects of MSF's organization that counter classic bureaucratic expectations. As noted in the introductory chapters, the institution is more properly characterized as an association or movement as opposed to a bounded corporate institution; the decentralized network of international offices act largely independently of each other. Within offices there is a hierarchy, but it is relatively flat. Authority is diffuse, with large latitudes of autonomy granted to practitioners in the course of their daily work (Mintzberg and Van der Heyden 1999:92). This pattern of decentralized authority may partly be an artefact of the anti-authoritarian tendencies of its founders (Redfield 2013:53-59), partly the character of transnational institutions and partly a practical response to the nature of institutional life in emergency, where attempts at rational administration are inevitably frustrated by circumstance.

These characteristics do not negate MSF's present bureaucratic character, however. Ethnographers have shown intricate and highly-elaborated forms of bureaucratic governance at play in other institutions that are equally (arguably more) autonomous, distributed and philosophically inclined to anti-authoritarianism (Coleman 2013:126-129; Ford 2015:21-23,33-35). These studies of Internet-based, collaborative organizations demonstrate that complex, highly-productive technocracies need not run along traditional, office-based hierarchies. Similarly, they illustrate that technocratic structures need not be rooted in a professional status quo, but

can pursue idealistic aims through voluntary action. The next section delves further into how this semi-autonomous, diffuse MSF network creates knowledge, and introduces the critical role played by numbers.

“In nutrition you’re OK.”

BD: “In nutrition you’re OK.”

MH: “Yes, OK.”

VF: “OK. But there is measles.”

BD: “How is the market?”

This is a passage from my field notes. It comes from a meeting in Juba, South Sudan between members of the Country Management Team (CMT) of MSF-OCA.

These people are the medical and operational chiefs for OCA’s emergency intervention in South Sudan. There are about 20 of them. They sit in a crisp, air-conditioned cargo container in the tiny, orange dirt parking lot of the MSF Juba office. Female and male, African, European, American, Asian; they range in age from their 20s to 50s. But they all share a sameness of demeanour. They are serious. They lean forward in their chairs. They face each other across a table; not a table, really, but five tables bumped against each other to make one enormous table. They speak rapidly, business-like. These people are discussing the health of other people, a population of people.

There are not enough chairs. I sit on the floor, cross-legged. I scribble notes fast, but not fast enough to take it all down verbatim. A little more is said, a little elaboration given, but not much. The exchange lasts 25 seconds, perhaps 30, no more:

BD: "In nutrition you're OK."

MH: "Yes, OK."

VF: "OK. But there is measles."

BD: "How is the market?"

There is some discussion. BD asks, if you compare this year to last year what is the situation? VF doesn't have those figures at hand but she can get them from GY.

BD says, "can we ask GY to develop an overview specifically for Lankien", looking at population versus malnutrition.

VF: "OK." They'll do measles and Polio for 17,000 U15s.

Field note entry 00184D/2014-05

That is the end of the matter (in the notes at least). The conversation turns to another topic.

Typing up those notes, three hours after the meeting, I re-read the first four lines and sit upright. "Bruno Latour would love this," I say to myself. It's a sparse, cryptic exchange. Like a koan. But for those who know, this exchange covers all the bases; it ticks all the boxes. It tells us what we know, and don't know, and what we need to find out at the present moment (that is to say for this week and maybe next week). An executive summary, it raises key questions and takes a decision on the next action needed; it is done in 30 seconds, and all in telegraphic code. Insiders can read this typed code (79 words, 428 characters) and say yes, the team did OK on this one, good enough for now.

The exchange strikes me because it is exactly the sort of thing I've been looking for. It illustrates the thing I came to South Sudan to study: how aid workers grow to understand and characterize crisis.

During my fieldwork with MSF people often complained they got no work done in meetings: meetings were just a lot of talking. Afterward people went apart to do "real work" sitting at desks or on patient wards. But this short dialogue opens a window on just how much work is done in a meeting, within a few seconds of conversation.

In four lines and four seconds: food, a virus and economics are put together in a box. The conversation lasts another 21 seconds or so. The population (that is to say, people), this year, last year, a place (called Lankien), another virus (Poliomyelitis) and 17,000 U15s go in the box too. The box is closed and labeled “Nutrition (Lankien): OK”. Then a very important thing happens: a question mark is added behind “OK”.

At the end of the meeting (1 hour and 45 minutes of similar exchanges), the person named VF (I will call her “Veronique”) will pick up the box labeled “Nutrition: Lankien OK?” She’ll carry the box out of the air conditioning, step down from the crisp-white-brand new-expensive container, into the heat and up the cracked steps to the shabby MSF country office, where the Wi-Fi doesn’t work, really, ever. She will walk down the hall to the place where GY sits behind a computer, put the black box on GY’s desk and open it.

Inside a black box

If Veronique remembers the whole discussion, or if she has taken good notes, and if she wants GY (I call her “Sekai”) to understand the reasoning behind the order on the desk, Veronique will explain (in far fewer words, a casual tone and a French-African accent) about Lankien. Sekai will know “Lankien” is an MSF hospital in a town named Lankien in South Sudan. Lankien hospital is big. It is possibly the biggest hospital in all of the MSF movement, which might make it the biggest medical humanitarian hospital in the world.

“Big”, in this case, is measured in patients: the number of people who transit through the hospital to be seen by medical staff. This in turn is measured in numbers of out-patient consultations (those who visit for a few hours), in-patients (those who stay overnight), percentage bed occupancy, number of laboratory examinations requested and so on. No one actually knows if Lankien is “the biggest,” because there are so many variables to consider and

so many hospitals in the world to compare—no one has the time to consider all those. So Lankien is “big”; it becomes a frame of reference for other hospital projects that may approach it in volume.

Veronique will explain to Sekai that she is concerned that, as a result of the present civil conflict, crops and food stocks have been destroyed and this will result in increased levels of acute childhood malnutrition. People who know about childhood malnutrition define it in different ways (the second half of this chapter and Chapter Four explain some of these definitions in detail). In this case Veronique is concerned that children in Lankien town (now, or in the very near future) simply won’t have enough to eat; so they might die, or suffer permanent damage to their health. While the population at large might be hungry, Veronique and Sekai know that children under the age of five are generally the first to be physiologically impacted by hunger. Veronique and Sekai also know that starvation (or in their specialist’s language, “acute malnutrition”) can be measured and recorded on an individual basis through the use of number scales (indicating “nutritional status”). Those individual measures from children can be aggregated to form population data. Veronique and Sekai also work from the knowledge that the nutritional status of children is a bellwether for the nutritional status of entire populations. Thus population data can be extrapolated to indicate roughly how many people in the population are starving. Above a certain threshold mass mortality is likely, especially in children under five. All these dozens of facts and assumptions underlie a single line of our dialogue, BD’s opening statement: “In nutrition you’re OK.” (hereon I call BD, “Marc”).

Veronique is worried because there are cases of measles in Lankien. While incidences of acute childhood malnutrition are within acceptable levels (as defined by people who know about acceptable levels) the spread of measles among young children can change that very rapidly. A

child who contracts measles is at very high risk of malnutrition, and vice versa. This concern was reflected in the third line of dialogue, “OK. But there is measles.”.

Marc’s query, “How is the market?”, asks about the price and availability of foodstuffs in the public market. Veronique and the others were unable to answer this question. It is difficult to have a good understanding of the availability of food in the market, or people’s ability to purchase food even in the best conditions, let alone in the present conflict. Nor does Veronique have good knowledge of the number of people in Lankien, because mass displacement is characteristic of conflict. Given all these uncertainties, Marc cut the discussion short to focus on one key measure. He asked for an analysis of percentage of malnutrition in comparison to the population over time.

In theory this is a straightforward analysis. It compares the number of individual cases of medicalized starvation, as admitted and treated in MSF facilities, to the overall estimate of the number of people in Lankien. It draws the comparison on a month-by-month basis. Because MSF has been in Lankien for many years, they have hospital data for many years. Thus it should be possible to compare this year to last year and the year before. Seasonal trends will emerge. The analysis will be graphed in a line or bar chart. The graphic would normally take the form of a bell curve. One would expect to see the curve amplify as the hunger months approach, and fall off when the harvest months arrive.

It is straightforward in theory, but complicated in practice. Perhaps the key difficulty is knowing how many people compose the population, and how the population size changes over time. There is some census data for South Sudan, and population estimates from aid agency household surveys. However, given the population movements as a result of the conflict, these old population numbers would be rendered invalid.

Population figures are among the most sought after and most contested numbers in any emergency intervention. Agencies are fairly good at counting outputs—the number of patients treated, latrines dug or cooking pots distributed—but these figures are most meaningful if compared against the total number of people present. Even in a fixed, enclosed site it can be very hard to know how many people are actually there. The flows of people in and out of the place are constant. There may be deliberate or accidental mis-registration. Revised population figures can change an intervention success into a failure, and vice versa.

In this case, Sekai has one advantage: MSF will do a vaccination campaign to inoculate children under 15 years of age against the measles and Polio viruses. In the meeting minutes, Veronique’s statement regarding “measles and Polio for 17,000 U15s” makes reference to this. MSF has estimated that there are 17,000 children under the age of 15 (U15s) because recently a World Food Program (WFP) survey for food distribution registered around 38,000 people in Lankien. This is the sought-after population number. Since MSF knows that children under 15 years of age generally are 45% of the population demographic in Sub-Saharan Africa they estimated, for the purpose of the vaccination campaign, that there are (or were recently) 17,000 children under the age of fifteen within geographical definition of Lankien.

The vaccination campaign performs several jobs. To start, it gives Sekai a population estimate. Once the campaign is done, the team will return with more insight. They will remark on the perceived accuracy of the estimate and make other observations on the health situation of the people. Perhaps most importantly, the vaccination campaign will help keep acute childhood malnutrition to within acceptable levels. It will save life, though the number of lives saved can only roughly be estimated. (No one bothers to calculate how many lives have been

hypothetically saved, because no one has the time—it is enough to say that 17,000 U15s were vaccinated.)

Thus Sekai has the first and most treasured of humanitarian necessities: a recent population figure. And she already has the historical population figures. How the population changed between then and now is uncertain. Sekai must do what she can to estimate population changes over time. From this she should be able to produce the graph that compares rates of malnutrition over time. And from the graph, Sekai, Veronique and Marc should be able to tell if nutrition is OK in Lankien.

All of the above analysis will be implied, but largely unspoken, in Veronique's instructions to Sekai. If Veronique is in a rush, because there are dozens more open boxes on her desk, she will not *imply* anything but say: “for Lankien, give us a comparison of population size versus malnutrition rates over the years” (15 words). She might name the day and approximate time the comparison will travel from Sekai's email outbox to Veronique's inbox (on the Wi-Fi that doesn't work). And Sekai will know (we hope) what must be done.

This 30-second dialogue, and the analysis that follows, further opens the window on factors that underpin MSF's knowledge *in* and *of* emergency. It illustrates the immense amount of coordination work involved in producing a coherent account of crisis. The dialogue lasted 30 seconds—yet covered all the material outlined in the 1,600 word analysis that followed. The case demonstrates Ludwig Fleck's axiom that “even a single word can represent a complex theory.” (Fleck 1979 [1935]: 42)

The meeting on that day ran an hour and 45 minutes. During my fieldwork I attended well over 100 such meetings. I noted the dialogue and discussions in similar detail, and so the meeting

minutes in my field notes run to tens of thousands of words. While the dialogue excerpted here is a minuscule snippet of those records, this short exchange brings out some of the central features and observations from those notes.

As outlined in Chapters One and Two, MSF's key concern, the collaborative understanding that unites MSF people, is a focus on enacting an appropriate response to human suffering. This response is enacted through a common (historically European) framework for aid. That framework sees the reduction of suffering and assertion of individual autonomy as the goal, and structured medical care as the means to that goal. There are many assumptions within this framework, many things taken for granted that would be invisible to outsiders. Thus the vignette also highlights why aid action may at times appear absurd or incomprehensible to outsiders. The telegraphic, encoded nature of the communication is likely the first thing that readers note; the multiplicity of assumptions that underpin this exchange become evident as one starts to pick apart the meaning of each phrase.

It is also apparent that this exchange is solidly empirical in focus—in a practical and clear-headed way the participants try to ascertain facts of a given situation—yet the dialogue remains permeated by uncertainty. Lack of certainty, and the ongoing attempt to define a path towards greater certainty is perhaps the central feature of this discourse and the hundreds like it that I witnessed.

By extension, the dialogue implies that our knowledge of crisis is provisional and iterative. If all empirical knowledge is by nature provisional and iterative (Latour 1987:27-29), knowledge of crisis is more provisional and more iterative. The cycle of information-finding, analysis and revision happens blurringly fast in the context of emergency, as new reports and contrary data enter view minute by minute or hour by hour. Indeed in the dialogue itself we have an example

of this, where the introduction of a new factor, “but there is measles,” changes the flow of the discussion.

This fluidity is a characteristic feature of knowledge in and knowledge of emergency: it is never fixed, but always in process. Knowledge and action are never conclusive, only “good enough for now”. The dialogue further draws out the importance of insider knowledge and the key function of specialist language as a shorthand for accepted knowledge, assumptions and values.

The example also shows the often improvisational and chancy nature of MSF’s action and intervention, where so much depends on the individuals: individual knowledge and individual reactions. Yet at the same time, the response is collective. The exchange highlights the collaborative nature of knowledge-making, as the leader, Marc, places a request for information and clarification on the table and individual practitioners bring specific concerns to the table. There are shared concerns and shared ways of seeing—a collaborative understanding of the situation, a shared template of knowledge and values. This specialist knowledge influences not only what facts we select to use in our analysis, but what facts are elicited in the first place.

The vignette also highlights numbers as a focus and currency of debate. Numbers are everywhere in emergency. Numbers and measures travel across time and distance. They are mutually comprehensible to experts sitting at all levels of the institution—from the bedside to the headquarters. In situations of chaos and uncertainty, quantification provides a foothold, on which other questions and decisions can form. In this way, numbers and the debate over numbers occupy a central part of the discussion.

Clarity Through Numbers

The chapter thus far has given examples of the micro-interactions of knowledge-making in emergency. It demonstrates how contingent and how collective that process is. Our understanding and response to emergency is built upon chains or networks of interactions generated from encounters just like this one. Where the preceding sections highlight interactions between individuals—this section will examine how individuals interact with numbers and how numbers interact with the institution. I will also consider the values that govern numerical knowledge.

In the preceding ethnographic narrative, the power to resolve (or at least further) the debate rested with someone called Sekai. A young woman, small in stature, from a nation in southern Africa, Sekai wears beaded dreadlocks and a colourful hairband. She is merry, chatty and always laughing; on weekends she organizes parties and dancing at the expat house. These characteristics alone would make Sekai a fixture of the Juba office (in emergency, good cheer is priceless, and leisure fleeting). While she occupies a very junior position in the MSF management hierarchy, she plays a key role in MSF's enactment of crisis; she holds a central place in the network of statements, assumptions and decisions described above. Sekai is an epidemiologist. Or, not-really-an-epidemiologist, as she is quick to tell me. She trained in public health, and worked with MSF, and did some courses in epidemiology. That—the medical people who hired her to this role said—is good enough for now.

Sekai knows spreadsheets and graphs and she knows the theory and practice of public health, she knows infection control, patient tracing and environmental health. Importantly, she knows MSF, the institution. With her spreadsheets and graphs, and the best of intentions, and

with the information that come from Veronique (an MSF medical doctor), is an act of purification aimed at understanding the essential character of a situation.

On a Saturday, before noon, I sit with Sekai as she explains the epidemiological database to me. We sit in the cavernous common room of the expatriate domestic compound we share with around 20 other MSF expats. In the boom days around the time of South Sudanese independence, this structure was built as a hotel, about 20 cube-like bedrooms in three blockhouses, with the restaurant—this room—as a fourth block, all jammed into a 30x30m lot. It didn't last long as a hotel. The owners made better money hawking the whole compound to MSF. The hotel had a plastic pretence to luxury, and the entire place was shoddily built. A door handle or tap might snap off in your hand. There was no hot water, so I bathed shivering on the chill mornings of the rainy season. In the dining room where we sat, the large ceramic tiles were laid unevenly; they had heaved, become unstuck and cracked. The expats walked gingerly in spots, as the tiles groaned, shifted and tilted under them with a brittle crick-crack.

Today, Saturday morning, a small group of Kenyan staff sprawl on sofas watching a Nollywood movie. With the TV noise in the background, and the crick-crack of our chairs on the broken ceramic tiles, we peer at Sekai's computer as she clicks to call up the data tool.

The data tool is a series of linked computer spreadsheets. A single Microsoft Excel file, it looks like most other spreadsheets, only this one is painstakingly designed, with an eye to readability despite complex, interrelated formulae. The medical data tool is a collection point and data repository for numbers from all the medical activities on the mission. Each type of activity has its own spreadsheet and its own indicators. There are spreadsheets for surgical activities, HIV treatment, maternal health and other things. Because I am interested in nutrition Sekai clicks to those.

She talks as we go. She tells me about “epi weeks”: the foundation of epidemiological analysis. The data tool uses number of cases per epi week as the basis of its measurement. How a “case” is defined depends on the individual spreadsheet—the individual thing being measured. It might be an outpatient consultation, or an inpatient or a mother who gave birth in the hospital. For epidemic surveillance the data tool maintains separate reckonings for highly infectious diseases like malaria, measles and Kala Azar.

It’s essential, Sekai tells me, that the epi weeks are identical. You need identical units in order to be able to compare them. The epi week always starts on a Monday and always ends on a Sunday. There are 52 epi weeks in a year. Epi weeks don’t follow calendar months. This can create some confusion, she says, because the mission’s Monthly Medical Report (MMR) works on calendar months. Some MMRs, therefore, will include four epi weeks and others five epi weeks. Conceivably, this can skew the monthly data, though the variation is usually not that great.

On a given week the number of cases might be the same, higher or lower than the week before and the week before that. Thus cases per epi week shows whether a given caseload is increasing or decreasing over time. These are morbidity trends. The data tool also tracks the number of patient deaths from a given cause. These are mortality trends. An “epi curve” is a graphical representation of these morbidity or mortality trends over time: it generally looks like a bell curve.

Disease trends ebb and flow with the seasons. Malaria goes up in the wet season, for example, as the carrier mosquito, which lays its eggs in stagnant water, has more opportunity. Kala Azar, on the other hand, is a dry season disease, usually carried by sand flies. Likewise, undernutrition-related morbidities tend to increase the further one gets from harvest time.

Over time, as the data accumulates, MSF can come to have several years' worth of data for a single location. Thus more accurate prediction becomes possible—in theory—if all other factors (population size, program size, level of conflict and so on) remain roughly equal.

Sekai shows me how epi curves can be used to calculate all sorts of things. Because epi curves are geographically-specific charts of morbidity patterns, not only can they be used to predict disease outbreaks or hunger periods, but they can also be used to calculate finances, supply buffer stocks and delivery lead times. A good logistician, Sekai tells me, can use hospital consumption figures and her epi curves to predict the week (in some cases, the day) that the last of a given medicine will be used. In this way they can re-supply the project just in time, so the supplies don't sit around ageing on the shelves.

But such precision is rarely necessary or desirable—precision takes time, priorities change and unexpected things happen. So she says, for medium-term thinking about reports, medical stocks and lead times, a month is usually good enough, as accurate as needed. It is easier, faster and more effective to think, order, pay and write reports in those terms.

Patient numbers are the basis of most all calculations. The chart uses the number of patients in a given situation to define the size and severity of those situations—in terms of workload, infection rate, mortality or other factors. Patients are split into additional sub-categories on the basis of age. In the case of food and nutrition, children under six months old have different nutritional needs, and different vulnerabilities, than children between six and 59 months. So they are listed separately. Children under five years are also those we would expect to see impacted first, and most severely, by lack of food. These two groups should make up the vast majority of numbers on the spreadsheet. So, she says, if five to fourteen year olds or adults start to appear on the chart, which flags a situation that needs closer investigation. Something is out of the

ordinary (in a situation that makes childhood malnutrition ordinary: subject to measurements and routine).

These are the basics of the key indicators: patients in, patients out, total patients. Once the spreadsheet has these figures, it automatically compiles the data for the month. These three figures by themselves give a good indication of workload and (other factors being neutral) the nutritional health of the population. There are more figures than just these ins and outs, however. There are spaces to calculate the type and frequency of morbidity, the rate of attendance, the average weight gain per patient, the number of relapses and readmissions, the patient point of origin and the relative success of referrals. Not all of these indicators may be used in every project or every country all of the time, but most of them are. Once the columns are filled-in graphs and indicators are automatically generated by the embedded formulae.

These numbers are useful to inform and guide the intervention. Yet the numbers themselves require intervention. That is Sekai's job—to manage and make sense of the numbers (“to clean the data”)—but Sekai is also dependent on others. Sekai is not the one treating patients or recording the numbers on the hospital ward. The numbers go through several phases of inscription and interpretation before they arrive on Sekai's desk. At the project level, data recording for each individual patient is the responsibility of the medic, be they a nurse on the ward or a minimally-educated assessment measurer working out of the back of a LandCruiser. The data on each patient will be collated into a daily and weekly summary.

The chief medic on site—the Medical Team Leader or MTL—is the overall responsible for the data collection at project level. They should not collect numbers blindly, but crosscheck them and read into them. If something doesn't make sense to them they should query the department supervisors. You can tell when the medics are interested in data, reading it and using it, Sekai tells

me, because it comes clear and carefully-checked. In other cases, if someone is not interested, it comes in a mess, incompletely or incorrectly entered. Then Sekai has to follow up with the project directly, emailing or speaking to the medics to correct each anomaly one by one. The email chains that result can be long and frustrating.

In this way numbers are marked, checked and transported from bedside to bureau. Each project has its own data tool, and each department has its own spreadsheet within the tool. There is a separate reporting format for outbreaks. Sekai's big work comes at the end of each month, when she must compile the numbers from all the projects into a monthly report. The report makes its way to Veronique—Sekai's boss—who checks and queries the figures and from there it goes to the headquarters, where the same query process follows.

Beyond the monthly report, all data from past years can be combined in one tool to get a multi-year overview. It's called "the multi-year compiler" and it can develop graphs to visualize trends. This can be helpful if trying to predict the future. But there is a problem as well: because of the way MSF works—with short-term projects, high turnover and changing indicators—data is not collected consistently. In South Sudan MSF only has data back to 2010, and only partial data at that. Sekai tells me, this doesn't necessarily make it bad data, only partial data. In many places in South Sudan MSF's partial data might be the best, or the only, data available.

There are other weaknesses. The weak point of the whole system, Sekai tells me, the place where it can collapse totally if the team is not careful, is the key importance of filling the sheet weekly. The backlog of data entry accumulates very quickly. If the team waits until the end of the month it can be a chaotic and confusing process.

It can be a systemic problem. Sekai tells me in her singsong Southern African accent, “people kinda think data collection is not a priority”. MSF medics often “prefer to sit with patients”, for example, and do things other than data collection. Most medical people don’t join MSF imagining they will go to faraway places to crunch numbers; they join to be close to people in situations of suffering or need.

When a new medic comes, Sekai says, “you hope that they at least like numbers” and can see the utility of the data they gather. This is not always the case. Some project medics resent being pressured for data. Sekai tries to convey the purpose and utility of the numbers to them; she mimics their response to her requests, her beaded dreadlocks rattling: “Do you think that’s all we do all day is gather data?!” Sekai waves her hands in mock frustration: “that’s how we know what’s going on!” So Sekai and the MTL end up chasing individual medics and department heads to submit their numbers. And it can happen that quality of reporting is poor, because there is so much going on and many people don’t agree on the importance of numbers.

There are errors in the data. Sekai tries to catch them, but doesn’t get them all. There was one instance, Sekai says, where someone made a typo in the data entry and it looked like we had 174 patients in the service, when in reality we had fewer than 20. This sent alarms ringing in the capital and people made urgent enquiries to investigate this sudden influx of patients. That typo didn’t take long to clear up, but an extra digit in a single cell might escape notice. The sheet auto-calculates mortality rates, so if you’re not paying attention and you have a typo you can get very misleading information and that can result in wrong action, says Sekai. “You can end up creating a disaster where there is nothing, really.” I nod. I don’t say it out loud, but think that equally you could cover up a disaster with a typo. A critical error might sit unnoticed for a month or more. It takes someone with a practiced eye to spot it. Epidemiology is foundational to MSF’s way of knowing, but relies on individuals that are attuned to the nuances of place and time: people who

have a feel for the numbers. Numbers have context—social, political and medical context. It's Sekai's job as the epidemiologist to read that context in the numbers.

“Medics can get blinded by seeing the patients,” Sekai tells me. She goes on to explain that the project medics work on the cusp, where MSF meets the people, usually in the wake of crisis. The effects of disaster are often most evident here—on the bodies of those seeking medical care. Project medics, Sekai says, will normally see the worse, most severe cases from a given population. Those individual cases can be very bad, but that level of acuity is not always carried over to the population level. For example, the medics on the ground might cry out that they are seeing too many acutely malnourished children. Yet those fears are not borne out in the numbers. “Sometimes the situation seems worse than it is ... when looking at historical data you find it's normal.”

The other danger—a related danger—Sekai tells me, is to read the present into the past. Sekai gives the example of a multi-year reading of nutritional trends. As the MSF presence in South Sudan grew and shrank over the years, so too did patient numbers, a natural consequence of more or fewer interventions. You need this awareness as you look at the numbers. If you look at the mission's combined nutritional data and you don't realize that there were more projects and bigger coverage in past, then it can look like some years were worse, when in fact they may have been average. “It's not just about looking at the data. You have to look at the whole picture.” This is Sekai's work.

Three Registers of Dialogue

Through the preceding ethnographic narratives, this chapter examines three kinds of expert dialogue: dialogue between individuals; dialogue between individuals and numbers; and dialogue between numbers and the institution.

I have spent much time in this chapter documenting and analyzing dialogue between individuals, because it is important to the understanding of my central question of how practitioners come to know and name crisis. The material demonstrates how understanding of the situation is provisional, reflexive and iterative. But the question of how individuals relate to one another in the exploration or practice of emergency is only one part of the equation.

My Saturday morning talk with Sekai gives insight into the other parts of the equation, which include (on one hand) how the individual relates to the institution—the organizational structure that brought them to South Sudan and both enables and impels action—and (on the other hand) how the individual relates to the technology that is used to measure and treat the effects of emergency. In particular, I focus here on one technology or technical practice: the use of numbers, manipulated through basic epidemiological techniques, to measure and quantify emergency. Because, in this case, numbers are a shared system that unites the people, institutions and technology.

Numbers are the language of bureaucracies (Scott 1998:81-83). Not only do they render the chaotic, legible but they travel well over time and distance. Numbers stabilize and transmit the ontological character of events. The skilled application of numbers allows for comparison (Porter 1996:5, 14-15). This is particularly critical in a public health emergency setting, where mathematics can make geographically or temporally distant situations mutually intelligible. Because they are clear, fixed, transmissible and comparative, numbers hold promise of the ability to predict and manipulate the natural world (Porter 1996:5, 19.)

Hence the dialogue between Marc and Veronique ended with a request for numbers—a request for numerical comparison, a request for clarity through numbers. This is an attempt to put nutrition in Lankien on an objective footing. “If you compare this year to last year, what is the situation?” By properly manipulating the data—the partial and imperfect data that Sekai gets from the hospital—an objective comparison becomes possible: is the situation *worse* or *better* than last year?

Yet social mores and values are inherent in numbers. Numbers are imbued with moral weight. Is the situation worse or better than last year? The very existence of a percentage measure to define childhood malnutrition implies that hunger is wrong and that children must not starve. Just as technological artefacts embody politics (Winner 1980:134-135), so too do numerical formulae. We value what we measure and we measure what we value.

As I peer over Sekai’s shoulder at her spreadsheet, I come to understand how this practice of knowing crisis might be central to how MSF works. MSF medics first and foremost diagnose and treat individual patients. This is diagnosis and treatment of crisis in the individual body—care for individual crisis. Over the course of months, these MSF medics might see thousands of individuals. Most share the same illnesses: brute, Victorian killers like malaria, diarrhoea or measles. When MSF people treat those thousands and write down, in numbers and words, what was done to those thousands they make data: the material that Sekai works with. Data material, properly worked, makes it possible to use the diagnosis of the individual to diagnose whole populations: populations in precarious situations, like the 17,000U15s in Lankien under the shadow of measles.

Sekai's spreadsheet is a type of inscription device (Latour and Woolgar, 1986:51) that aggregates individual illnesses into baselines, trends and forecasts. She enables a multiplicity of encounters to be viewed as a single thing—a thousand individual interactions between patients and clinicians, reified into a single number or a single graphic, the focus of intense expert scrutiny. While there is not an epidemiologist in every MSF mission, there is always someone who fills this role—someone who collates, assesses and analyses the data to produce an overview for others to assess and analyse.

This is a familiar model: clinical medicine treats individual cases while public health aggregates the numbers of those cases to produce a mathematical rendering of reality. If we take starvation to be a form of suffering, and view the number of presentations at hospital for acute undernutrition as indicative, we can quantify—and even compare—group suffering with mathematics.²¹ But this is only part of the process in MSF.

In far-away-places, where MSF works, patient illnesses often originate as a result of war or starvation. Such events are not (or are not assumed to be) the normal state human of affairs. They are seen as abnormal: an imbalance; the product of gross differentials in power. So, just as starvation is an imbalance in the individual body, mass starvation can be seen as an imbalance in the body politic. MSF doctors diagnose—and treat—the aftereffects of politics on the bodies of their patients. Clinical medicine and public health, combined with a sense of politics makes clinicians and epidemiologists into diagnosticians of political crisis (Herzlich 1995:1618; Orkin 2010:5-6): in the 21st Century 17,000U15s *shouldn't have* measles. MSF says as much, often publicly (Redfield 2013:112).

²¹ As the next chapter will reveal, with different tools it may also become possible to quantify and compare individual sufferings against one another.

The central role of epidemiology within MSF gives insight on at least two features of the organization: first, that to some extent, it is not only feasible but desirable to quantify and compare suffering. Second, moral assertions are made through numbers; in medical humanitarian emergency statements of fact are also moral statements. The numerical rendering of starvation in South Sudan enables MSF to compare current episodes with different places and times. These comparisons of magnitude help determine where to allocate resources. They also enable moral discernment—an argument from the numbers on what justifies intervention here as opposed to elsewhere. Indeed, the very act of measurement makes a moral statement on hunger. If we measure what we value, then the existence of a large-scale, transnational technocratic apparatus that quantifies and compares childhood undernutrition indicates how deeply some hold this value.²²

This is a key aspect of MSF's practice of emergency. An assertion of fact is also a moral assertion. Through their privileged position, as a medico-rational institution working near the heart of conflict, MSF produces and publicizes a uniquely authoritative account of disaster in action. Part war correspondent, part scientist, part concerned citizen, this combination of descriptive data and moral narrative produce what Peter Redfield calls "motivated facts" (2013:113): an objective account of human suffering presented as a means of direct moral commentary and policy persuasion. Redfield characterizes this as persuasion with data as opposed to sentiment. An MSF epidemiologist, like Sekai, enables facts to speak for themselves, to tell the story of how power and politics have worked upon the bodies of patients (Redfield, 2008b:131). In situations where MSF may be prevented from speaking out directly—by government censure, for example—motivated facts come to witness and speak on behalf of MSF and its patients.

²² The hunger-measurement apparatus exists alongside larger apparatuses, of course. Budgets and calculations of gross global expenditure are another means to quantify what we value. From this perspective, the hunger-measurement apparatus is minuscule compared to a vast number of other industrial-scale value-complexes.

While Redfield spoke primarily of motivated facts as a means to sway external audiences—the public, politicians, pharmaceutical companies or militaries—it is important to note that this practice—the performativity of numbers—is not done exclusively for public benefit. Before they make their public debut, the same numbers make the rounds in the internal reports and debates that we have witnessed in this ethnography. Throughout the discourse one finds numbers pregnant with moral implications. As revealed here and in subsequent chapters, MSF maintains an entire institutional structure dedicated to cultivating and harvesting fact-values as means to determining action.

What happens when those numbers, imbued with the weight of morals, enter into a bureaucratic machinery like the transnational apparatus of MSF? I argue that the result might be perceptibly different from the instrumentalising bureaucracy that we find in the work of Weber, Foucault or Scott. This is the concept of technocracies of care that I take up in my final ethnographic chapter.

Summary

In the circumstances that characterize medical humanitarian emergency, information and decision-making are reflexive, provisional, iterative and collectively-constituted. The chapter highlights the pivotal role played by “hidden” technologies such as the meeting room and the epidemiology spreadsheet. It argues for the central role of numbers in discourse and decision-making in the context of medical humanitarian emergency.

Among the senior managers of MSF-OCA, knowledge of emergency is established through a combination of dialogue and numbers. Specialist managers put forward multiple concerns,

assumptions and assertions as they gauge a given situation. The dialogue (“In nutrition you’re OK”) illustrates the social construction of a medical humanitarian fact. The exposition highlights a chain of reasoning—a series of logical dependencies—that seek to establish truth. Various statements are bracketed or unbracketed in the course of dialogue, as practitioners work towards a conclusion (Mol 2002:64). This section emphasizes fact-making in crisis as a collaborative, iterative process.

The dialogue highlights the pivotal contribution of data analysis to the debate, and many debates like it in MSF. Sekai’s epidemiological data tool functions as an inscription device (Latour and Woolgar, 1986:51) to transform the material bodies of patients into numerical or graphic representations of crisis. Through these renderings, individual illness experiences are made collective, authoritative and predictive. Aggregation transforms personal suffering into baselines, thresholds and progressions—while individual experience is obscured, aggregation becomes simultaneously a view to the magnitude and spatial extent of humanitarian emergency, as well as a predictor of trends.

Through expert analysis and careful deployment, numbers can be made to speak for themselves. Properly presented, in a certain context, numbers make an argument for or against intervention. These are what Redfield has called “motivated facts” (2013:113). While they may be used to persuade external audiences, motivated facts make the rounds in embryonic form within the institution first. The process of debate—coming to grips with the facts, deciding which facts matter—is partially revealed in this chapter, and in the chapter that follows.

Many of the essential processes that constitute emergency—much of what makes emergency a named and actionable entity in the medical humanitarian sense—are works of collective coordination enacted around meeting tables and on spreadsheets hundreds or even thousands of

kilometres from the site of intervention. The chapter shows how many parts of the process are contingent or chancy: much can depend on how individual personalities interact or how long a data-entry error goes unnoticed. Much also depends on the data that comes from the intervention site, for example, whether or not a new medic has an eye for a world beyond the clinical encounter. As Sekai said, “you hope that they at least like numbers”; what comes after depends on what is gathered by one individual at the bedside of a patient. The next chapter goes to one of those intervention sites: a large MSF hospital in Leer, South Sudan.

Chapter Four: The Dynamics in the Details

Chapter Four uses specific observations from an MSF field program to illustrate how numbers are generated in context and their immediate relevance to practitioners on the ground. Clinical aspects of MSF's programs serve at least two purposes: they give medical care to people and inscribe, document, or translate, individual care into aggregate numbers for use in decision-making.

The first section introduces the hospital. It recounts the violence that visited the community weeks before, and so establishes the setting and urgency of the medical intervention—MSF's institutional reason for presence. The following section examines starvation as pathology. It briefly explores why a particular sub-set of undernutrition—that of acute malnutrition—became a central focus for medical management, and how acute malnutrition can be construed as emergency.

The final portion of the chapter enters the clinic itself, an ethnographic examination of screening and measurement practices. I attempt to show how clinical practices generate numbers to not only serve the immediate therapeutic needs, but to feed into the system of epidemiological and data-driven decision-making within MSF. The chapter highlights some of the individual social, biological and environmental factors that can confound the gathering and interpretations of numbers. It argues that clinical measurements enable certain ways of seeing and certain paths to intervention while disabling others.

The chapter concludes with a reflection on how, in an institutional setting, realities that fall outside the numbers can be ignored. Institutions both enable and disempower individuals to act and, indeed, to see. Through an institutional lens the practitioner can miss, ignore or dismiss

what is right in front of their eyes. A focus on children may ignore the elderly. A focus on war wounded may miss those suffering from sexual violence. As Mary Douglas (1986:91) pointed out, “institutions do the classifying,” not individuals. Thus in a humanitarian setting, those who are counted are those who count.

Behind the Numbers: Crisis in Context, Place and Time

Perhaps one of the towns most impacted by the South Sudanese civil conflict and one where I spent the most time, was Leer in Unity state. Starting in 2013 and up to the time of writing, Unity state continues to be the scene of some of the fiercest fighting of the war. This is for clear reasons: not only does Unity contain some of the country’s riches oil fields, but, along with a smattering of smaller ethnic enclaves, Dinka and Nuer homelands abut each other in the state. The name Unity was chosen to celebrate the peaceful co-existence of the country’s two largest ethnic constituencies and traditional rivals. In the present context the name has proven a bitter irony. The birthplace of rebel leader Riek Machar, and positioned to the south of the oilfields, Leer town is a place of strategic and symbolic importance. The MSF regional hospital—which could be considered a strategic asset in wartime, and was certainly a hub of relief activities—made the location all the more significant to both sides of the conflict.

The town of Leer and its MSF hospital were largely destroyed by fighting in February and March. The local Nuer lost cattle and most of their food stocks when, displaced by the fighting, they were forced to shelter for weeks in Leer’s surrounding marshland. In May, as the frontline moved away from Leer the survivors emerged from the swamps, undernourished and ill, to find their homes and stores destroyed.

The community of Leer was thrust into severe food crisis. Following these alarming reports, MSF would return to the community and the site of the burned hospital. As might be expected, the team's initial rapid assessment showed very high rates of malnutrition, particularly among very young children. Therapeutic feeding for acute malnutrition had always been a large component of the MSF program in Leer, but soon the medics would find themselves overwhelmed.

Early in June 2014, I would walk into the middle of this when I visited Leer for the first time. Weeks before, while still at the MSF headquarters, I heard news of the destruction. I had steeled myself for the sight, yet I was still dismayed to circle the burned town from the air and then walk among the ruins of the hospital.

Exactly who burned Leer is a subject of contention. The government blames the rebels and the rebels blame the government. The perpetrators are faceless and the exact sequence of events is hazy. But what is not disputed is that the hospital was burned deliberately. A person can intuit what happened as they walk among the ruins. Exploring the heaps of melted slag, smashed medical equipment and hollow buildings, a person cannot help but imagine things as they might have happened.

I made this mental reconstruction as I walked amid the bustle of actual, physical reconstruction. I toured the ruins with Katherine, the English coordinator in charge of the hospital. To all intents and purposes, the hospital had been MSF's, or, more accurately, it had been loaned to MSF by the Leer community. Before the most recent conflict, healthcare had been the state's remit, but Leer was isolated and no staff from the Ministry of Health worked there. The Unity state headquarters in Bentiu was distant, and health representatives rarely visited. Perhaps it was not considered necessary; MSF had run the hospital since before South

Sudan was a country. MSF first came in 1988 when Leer was still a part of Greater Upper Nile, a rebellious province in the nation of Sudan. Throughout the Sudanese civil wars, the vote for South Sudan's secession and the creation of new, independent nation, MSF had run the hospital in Leer.

I would later get more history from Peter Deng, one of MSF's longest serving staff members, who joined the Leer project in 1989. The program varied in size and function. It first opened to combat an epidemic of Kala-azar, then broadened services. It contracted and shifted locations as conflict surged. As the population displaced, the project displaced and moved with the population, but always both groups settled back in Leer (Interview with XZ, 2014-09-03). The aid workers had staffed, supplied and managed the program for 25 years. Now, after the hospital was razed, MSF was back and rebuilding. This was the most serious incident of its kind, yet the needs justified the return. At least, Katherine told me as we walked, that was what she thought, for now.

We enter the hospital grounds through the secondary gate. We are surrounded by collapsed ruins and bare, burned concrete pads, where aid tents once stood. There are five of us on this low-key tour. The group includes three reporters, myself and the MSF Head of Mission, Marc (Katherine's boss, the NGO's national chief), who is returning to Leer for the first time since the destruction. As we walk Katherine answers our questions and narrates events. The food warehouse was first to be looted, she says. All the pre-packaged therapeutic food for severely malnourished children was stolen. The empty warehouse, a vast, hanger-like, semi-permanent tent called a Rubb hall, was set alight. Katherine points to the place where the Rubb hall stood. MSF workers had pushed the skeleton into a pile of scrap, but the outline of the foundation is burned onto the concrete where it stood. The food was the target, Katherine says—and they

took very little of the medical supply. To illustrate, she turns back and gestures to two large heaps of burned metal, fused plastic and ash: the medical stores.

While Katherine speaks on camera to the reporters, I poke among the remains of the medical storerooms, surprised by what I see. Recognizable in the ruins are boxes upon boxes of IV fluids, melted and coalesced into a mass. They sit untouched, burned on the shelves where they stood. Bandages and gauze too, bottles of antiseptic and antibiotics. Simple things any army could use. Better, surely, to steal all these things than to burn them.

On the far side of the ruin are the vaccine fridges; their panelled frames tall amidst the rubble, coloured by starbursts of black, silver and burnt orange. They are gashed and dented—it seems that before the burning the fridges were mauled with a heavy object. Vaccine bottles were thrown and smashed about. Peering inside one chest, I see a pile of slag and burnt cardboard. It looks like fires were lit inside the fridges themselves. I shake my head at the rage expressed against these inoffensive refrigerators. I wonder what the boxes and their bottles must represent to people who took the trouble to systematically brutalize and smash them in advance of arson.

As the group moves on, we find similar expressions of rage across the hospital. The rage is witnessed by the burned latrines. It is witnessed by the hospital wards used as latrines. It is witnessed in the illegible graffiti scrawled from engine oil, in the instrument kits and the laboratory materials strewn about the grounds, and the bright purple stains of gentian violet—an antiseptic dye—thrown against walls and floors. And it is witnessed in the surgical ward, where it seems materials were piled together and set alight. Something in those materials—probably there were oxygen cylinders—must have burned very hot, because the corrugated zinc sheets of the roof melted. Where the roof gapes a few drops of frozen molten metal hang like stalactites.

Our small group walks and talks as we traverse the rest of the facility. Katherine and Marc speak in interview. The journalists take photos and scribble quotes. Patients—of whom there are many—follow our progress with silent eyes. We see a lot of things and of everything we see the oxygen concentrators strike me most. Over the course of our walk I note four or five scattered in various states of fracture around the hospital grounds. It makes me sad to see them like that, their squat plastic bodies broken open. An oxygen concentrator looks like a wheeled suitcase, and moves the same way. Through a nose tube it can feed a patient oxygen-enriched air, concentrated from the ambient environment. When I was an aid worker, the first time I saw an oxygen concentrator on an MSF project was in Somalia in 2007. It was a magical apparatus. When everything else had been done, oxygen could make the difference. I saw it return children from near-death. In Somalia in 2007 it was an unprecedented medical technology to have in an MSF project—the most complex and fragile piece of machinery in the hospital. The team fought over where and how it was to be deployed: so many patients in so many wards could benefit from the oxygen—but to run that single delicate machine 24 hours and haul it through mud and gravel between buildings would surely break it. The team needed to decide who would benefit from it, and who not. In Somalia in 2007 we fought over a single device and here in Leer in 2014 they had five of these magnificent machines. All of them lay in open air, punched through, covers broken off, delicate filters and electrics exposed to rain. They would save no more lives.

Emergency Nutrition

What happened in the hospital was repeated throughout the town. Homes, fences and fields burned to the ground. Atrocities committed, and lesser war crimes too. Successive waves of soldiers and then returning civilians looted the ruins for what could be had—food, blankets, cups, chairs, bed frames.

People return to find only cinderblock buildings survived the fire, and there are few of those. “When you came to Leer,” one man tells me of that time, “you will not see, because everything is down.” Flat, overgrown expanses are left where once there were bustling homesteads. People build their mud and thatch tukuls from scratch, hauling thick wood poles from the forest hours away. People salvage or shape farming implements and begin to hoe their fields. The locals each have their own story of flight. When I speak to some of them, only weeks after the return, I am hesitant. I probe gently, if at all. The memories are fresh. Everyone lost relatives, everyone lost cattle and everyone has a personal trauma but—much more pressing—everyone is hungry.

In light of events in Leer, MSF would restart its nutritional programs almost from scratch. A few basics were in place—a few local staff members familiar with the program, a few buildings and open spaces—but most materials and expertise had to be flown in or locally recruited. While this was not a straightforward or instant undertaking, there was abundant precedent. Medical humanitarian emergency programs function along a template model that serves as a “portable map of frontline medicine” (Redfield, 2013:89). Built around standardized, transportable medicines, protocols and modular program components designed to meet the most basic of human needs, MSF operations look much alike in most parts of the world. Nowhere is this as much in evidence as in MSF’s nutritional programming.

Chapter One sketched the major categories and definitions of mass starvation in humanitarian settings. This section expands upon that initial discussion to outline the key principles and applications that underlie the specialist, technical practice of humanitarian nutrition. Just as undernutrition affects human bodies in a similar and predictable pattern, so a standardized pattern of therapy can be used to treat the gross effects of undernutrition. Research and analysis might make for minor tweaks from year to year, but both the treatment

schedule and the dietary components are standardized globally. MSF has a formula for treating malnutrition, and it works.

MSF's system is a global standard for a certain type of care: care for medical malnutrition—treatment of gross starvation in the classic sense—for those on the brink of death. The formula is lauded by experts (Bradol 2009:217-219; Briend 2009:193-194, 201). The therapeutic approach has been highly successful in treating this narrowly defined pathology, the endpoint of severe undernutrition. Yet those same experts readily admit its limitations: acute mass starvation is comparatively rare—confined to a few isolated parts of the world and subject to specialist scrutiny of global humanitarians (Bradol 2009:218-220; Briend 2009:196-201; de Waal 2005:187-193). The treatment of less acute and chronic undernutrition, rooted in politics and poverty, remains stubbornly resistant to medico-technical solutions (de Waal 1997:70-71; Sridhar 2008:156-158).

The treatment of starvation is a specialist technical practice that, in a clinical setting and in absence of confounding factors, is extremely successful in a medical sense. However from a public health perspective, or a perspective of food security or agricultural economics, the practice is less successful; the clinical treatment of medical malnutrition does little to address the root causes of hunger or the hundreds of thousands of cases that suffer from a less-than-acute malnutrition (Bradol 2009:220-222; Briend 2009:196-201 Waterlow et al. 1992:367-369; Scott-Smith 2013:926).

In MSF emergency nutrition programs, patients are divided into two classes: those who can be treated in the home, with occasional visits to the clinic, and those who are so severely starved that they can only safely be treated in a full-time hospital setting. In the clinical language of emergency nutrition, these patients are said to suffer from, respectively, moderate acute

malnutrition and severe acute malnutrition. It is important to note that both types of malnutrition are considered “acute.” This is the kind of malnutrition that MSF seeks out—sudden onset, rapid wasting; acute malnutrition can characterize (though it does not exclusively inhabit) war zones and other situations of mass disaster.

As briefly highlighted in the introductory chapter, there are other types of malnutrition. In addition to classifying starvation by severity (i.e. moderate or severe), nutritionists also classify it based on temporal character: whether it is short-term or long-term in onset and effect. In this way medical humanitarian nutrition recognizes two categories of undernutrition: chronic and acute (a third category—micronutrient deficiency—where a diet lacks one or more specific nutrients, is generally not elucidated in emergency nutrition settings at present). Chronic and acute malnutrition are otherwise referred to as stunting and wasting, terms that vividly describe their respective effects on a child’s body (Waterlow et al. 1992:188-190; Golden 2010:667-670).²³ Acute malnutrition is the product of immediate and severe nutritional deprivation—starvation, in the simplest terms. Acute malnutrition is generally (though not always) characterized by a diet constrained both in quantity (insufficient calories) and quality (insufficient macro and micronutrients); thus in the absence of adequate energy and nutritional intake the body consumes its own nutrient stores, resulting in physical wasting outwardly characterized by (among other things) lethargy, loss of fat and withered muscle tone (Waterlow et al. 1992:188-190; Golden 2010:668-669; Briend et al. 2015:16S). This is the malnutrition suffered by the skeletal figures that the popular imagination associates with famine.

As opposed to rapid, starvation-induced wasting, chronic malnutrition is a slower manifestation of longer-term undernourishment—typical of situations where the diet may be

²³ As earlier noted, in its strictest sense the term malnutrition includes both undernutrition and overnutrition (i.e. excess nourishment associated with overweight and obesity)(Shetty 2003:18). However in common usage, and medical humanitarian circles, the term malnutrition is largely synonymous with undernutrition. The word is used in that synonymous sense here throughout.

adequate to stave off acute malnutrition, but may lack in quantity, quality or diversity of nutrients essential to growth and healthy body function. This form of undernutrition manifests physically in stunting: delayed or under-average childhood growth as compared to age (Waterlow et al. 1992:188-190; Briend et al. 2015:S16). Both forms of malnutrition are also characterized by pathophysiological complications. In the case of acute malnutrition, patients can suffer anaemia, metabolic disturbance and lowered resistance to infection, while chronic malnutrition can result in a variety of later-in-life physiological complications that are still poorly understood (Waterlow et al. 1992:9-11; Briend et al. 2015:S18-S19,S20).

All forms of undernutrition are marked by a complex synergy with bodily infection. Undernutrition compromises immune function—this leads to higher rates and greater severity of infection that, in turn, compromises appetite, energy stores and nutrient absorption. A vicious spiral ensues: undernutrition leads to infection, which leads to more severe undernutrition, which leads to persistent and repeated infection (Tomkins 1986:289, 292-293, 296; Waterlow et al. 1992:290-292). Thus the number of people who literally starve to death in war or other emergency is effectively zero (de Waal 1989:187-193). The bulk of nutrition-related mortality can be attributed to infection, often simultaneous or co-infection with gastro-intestinal diseases (diarrhoeas), respiratory tract infections (pneumonias), and viral or parasitic infections like measles and malaria. For young children, any one of these infections can be a life-threatening condition by itself, leave alone malnutrition and the increased energy requirements to fight infection. Children will often arrive to treatment with one or more of these co-morbidities and, in the confines of a hospital ward filled with very sick children, have the opportunity to contract others. Thus malnutrition is a serious predisposition to infection; adequate nutrition is a means to combat infection, or at least, to combat the predisposition to infection (Waterlow et al. 1992:296-299, 304-308, 333-335; de Waal 2005:186-194)).

The effects of malnutrition, like those of many other bodily disorders, manifest upon a spectrum: bodies and environments are plastic while diet, activity, genetics and epigenetics are variable. Practitioners recognize the categories of chronic and acute malnutrition as approximations—practical, clinical markers that can only outline the effects of undernutrition on a patient’s body. As markers they are a shorthand for a range of outward signs and pathophysiological effects, but are not definitive. Not all malnutritions manifest in the same way. Acute malnutrition can be characterized by Marasmus (classic, skeletal wasting, associated with protein and Type II deficiency), Kwashiorkor (also called oedematous malnutrition, associated with Type I nutrient deficiency characterized by oedema and often associated with skin that is dry, cracked or “burnt” in appearance) or a hybrid Marasmic-Kwashiorkor (associated with deficiency of energy, proteins and nutrients) (Waterlow et al. 1992:5-9; Jackson 1986:43; Golden 1998:433-436; Smith et al. 2013:548). Although the gross mechanism—inadequate nutrition—is usually the same, the specificities of body, diet and environment mean that these are separate pathologies, with separate underlying causes, some enigmatic (Golden 1998:433; Smith et al. 2013:548-549; Briend et al. 2015:S20). As such they are managed with slightly different care regimens.

Chapter Five will examine the care regimes for various manifestations of severe acute malnutrition in greater detail. For now it is enough to reemphasize that, unlike some other medical humanitarian NGOs, MSF is primarily focused on acute malnutrition; it tends to leave chronic malnutrition aside. This focus is maintained for at least three reasons. First, acute malnutrition is unambiguously an emergency for those individuals affected—without intervention they are at significant risk of death. Second, acute malnutrition tends not to happen in isolation—it is generally accompanied by other forms of illness or violence; where one acutely malnourished child is found, there will generally be other children and other pathologies. Third, for a rationalist, clinical institution like MSF, acute malnutrition is comparatively straightforward

to define, treat and cure. Acute malnutrition has a clinical endpoint that is fixed and measurable—the moment when the patient passes into what is considered a healthy weight for age. This moment is often not far away; it can usually be reached with several weeks of focused therapy. Compare this situation to chronic malnutrition: characterized by a slow onset, rooted in systemic issues of how food is produced and consumed. Chronic malnutrition can only be combated over extended periods of time with broad-spectrum intervention, not only with food and medicine, but also in the spheres of the social, agricultural, economic, government and environment. Such intervention is beyond the remit of any one agency (Sridhar 2008:189; Briend 2009:198-201).

Thus MSF's emergency mandate prompts them to focus on situations of widespread, sudden-onset starvation and ignore places where hunger is nagging, systemic and general. This is inherently problematic because, in several places around the globe, severe acute malnutrition is itself systemic: at least among certain sectors of the population, is expected to occur on a seasonal basis (Briend et al. 2015:S18-S19; Brown et al. 1982:303). Even where acute malnutrition does not occur seasonally, chronic malnutrition often prefigures it. A situation of general chronic undernutrition can slide into acute malnutrition through sudden economic or political shock. This was the situation in Unity state in 2014, as chronic scarcity slid toward famine as a result of war and the more or less deliberate destruction of cattle and food stock.

In this way, it is most often the case that an MSF patient is discharged well-nourished from a feeding program to return home to a situation of food scarcity or other form of insecurity. Most of MSF's patients live in perpetual, existential uncertainty. What appears to be a laudable, straightforward ambition—to keep a starving child from death—becomes deeply entangled in history, political economics and ethics. This situation gives rise to long-running debate within MSF, policy and donor circles that questions to what degree emergency organizations should

address chronic undernutrition (Bradol 2009:220-222; Briend 2009:198-200). For now, however, MSF's primary focus remains on acute, medicalized malnutrition, treated through the twin lenses of the clinic and the emergency.²⁴

The MSF model of care for acute malnutrition consists of two complementary, supporting services: the Ambulatory Therapeutic Feeding Centre or ATFC and the Inpatient Therapeutic Feeding Centre or ITFC. Most patients enrolled in the outpatient therapy are diagnosed with moderate acute malnutrition—a lesser degree of starvation—while the vast majority of those treated in the hospital setting suffer severe acute malnutrition: an imminently life-threatening condition.

Using the same schema of moderate and acute, the operations of the ATFC and the ITFC are tailored to treat patients, generally young children, based on the severity of their condition. ATFC focuses on the moderate acute patients who can be treated on an outpatient basis. Since the number of moderate acute cases is always geometrically larger than the number of severe acute cases, ATFC deals with a comparatively large volume of patients. Thus the ATFC focus on seeing many patients in very quick succession; the centre specializes in rapid assessment, monitoring and distribution. The ITFC, by contrast, is much smaller and generally functions at a slower pace. A dedicated hospital ward, it sees to the needs of the severe acute cases, complicated and fragile, who require meticulous, around-the-clock care in the form of an intensive regimen of monitoring and therapeutic feeding.

In both settings, success (if such a thing is possible in medical humanitarian emergency) is quantified in the percentage of patients discharged as cured. Cure, in this case, is a patient that is clinically well (vaccinated, free of acute medical problems and with any chronic conditions under

²⁴ This approach is certainly the case within MSF-OCA; nutritionists from other sections might dispute my assertion. MSF-OCP in particular has grappled with how to approach chronic malnutrition. See Bradol 2009.

control), who meets the anthropometric criteria (the specifics of which are discussed later in this chapter) (MSF-OCA 2014:7-9). From ITFC patients are usually discharged into ATFC, while ATFC patients are discharged home. These are lives presumed saved. Failure is quantified in percentage mortality (those patients who died) and percentage defaulters (those patients who left the program against medical advice). In ATFC, a lesser degree of failure is discharge as a “non-responder”. This is a patient that, absent of any apparent pathology, fails to gain weight over a period of several weeks. There may be many reasons for non-response; it is often related to food practices in the home, or to a patient’s growth and physiology.

The ATFC is a relatively recent innovation in humanitarian medicine; in past decades it was not accepted or feasible for patients in famine or emergency situations to be given therapeutic food to consume at home. The idea of outpatient nutrition therapy required both empirical evidence that home-based supplementation of diet can be sufficient to reverse the initial phases of acute malnutrition and ready availability of nutrient-rich supplementary food for mass distribution (Briend 2009:189-194).

The drive to standardize and maximize the benefits of nutritional treatment led to the creation of Ready to Use Therapeutic Foods or RUTFs. Earlier generations of nutritional intervention functioned like soup kitchens. Nutritious meals were prepared in a fixed location from basic ingredients like corn, soy, sugar and oil. These preparations could be standardized into a mix, such as CSB—Corn-Soy Blend—a ready ground mixture that can easily be constituted into porridge. These simple preparations were enough to nurse severe acute inpatients to greater health and could also be served to children from the surrounding community suffering moderate acute malnutrition. Yet this model could only haltingly be carried further afield. Distribution of uncooked commodities—while they could benefit the household at large—could not specifically target malnourished children. The commodities were bulky and

unwieldy, since they didn't travel well over distance they might quickly be traded away; at home the men would likely take the majority share and children might receive too little, the commodities might be damaged in the damp or the porridge left out to spoil. Thus in the targeted treatment of childhood malnutrition, uncooked food left too much to chance and the individual household. A mass-produced, standardized solution could help to rationalize treatment and carry it beyond the confines of the clinic (Briend 2009:194-196; Scott-Smith 2013:916-917; 2015:245-246).

In the 1990s therapeutic milks went a long way to addressing this issue; milks like F-75 and F-100 found wide acceptance. These were nutrient-enriched milk powders that benefited from a combination of nutrient density, light weight and long shelf-life. Yet while milk powders increased the mobility of nutritional programs, they still were not "ready-to-use" in the strictest sense: the need to add clean water (a rarity in itself) was still a constraint (Briend 2009:194-195).

In the late 1990s, the first true RUTFs debuted in the form of nutrient- and lipid-fortified biscuits. The biscuits could be eaten out of the wrapper or crumbled into a porridge. They were sweet, so children enjoyed eating them. A range of other RUTFs appeared and were trialed in the field. One emerged as superior to all others: today MSF ATFCs distribute a very light, pre-packaged, transportable ready-to-eat RUTF in a colourful, shiny wrapper. The food is a nutrient-dense peanut-based pap with the charming brand name of Plumpy'Nut—a kind of very sweet, very sticky peanut butter (Briend 2009:195-196; Scott-Smith n.d.:11).

Plumpy'Nut is medicine in the form of food—a remark I heard frequently from medics in the field. Like all therapeutic foods it is scientifically developed to meet the nutrient needs of children recovering from acute malnutrition and infection. Plumpy'Nut represented a significant innovation over previous generations of therapeutic foods because it required no preparation;

like a pre-packaged snack food, it came ready to eat. The earlier generation of therapeutic foods, such as the therapeutic milks F100 and F75, come in powders that must be reconstituted with clean water. The mixing process is a prime vector for contamination; this can lead (for example) to diarrheal infection which can precipitate severe undernutrition. Thus milk must be reconstituted in antiseptic conditions, effectively limiting its use to hospital settings (Briend 2009:195). Plumpy'Nut was among the first RUTFs that could leave the site of the clinic to travel with the patient. This engendered a new role for RUTFs: no longer a specialist treatment for malnutrition in a field hospital setting, RUTFs could prevent the need for hospitalization in the first place. (Bradol, 2009:217; Scott-Smith n.d.:10-11). As such RUTFs, and Plumpy'Nut in particular, are representatives par excellence of the global humanitarian kit (See Chapter One)(Redfield, 2013:78-83, 88-90), a kind of “minimal life technology” (Redfield, Pers. Comm., 2014-Feb-12) that can be dispatched globally and distributed locally to meet the basic requirements of biological existence for humans anywhere on the planet.²⁵

In Leer, the ATFC was the entry point into the MSF nutritional program for most patients. When MSF first returned to Leer the crowds came of their own accord; hundreds of mothers brought their children to the ATFC in various states of undernourishment. As the situation stabilized, a greater proportion of patients came by referral. Some arrived at the ATFC from the MSF Outpatient Department (OPD), when mothers came seeking treatment for their infants' fever or diarrhoea. Other patients were referred by outreach teams or from other NGOs working in the area. Still others were discharged from another service (Inpatient Department [IPD] or ITFC) into the ATFC.

Some patients arrived at the MSF hospital in such a compromised state that they were referred directly to intensive care in the ITFC. This was more common in the opening days after

²⁵ For a critical history of RUTFs see Scott-Smith (2013; 2015a; 2015b).

MSF's return. As time went on, and more food entered the community, this became less frequent but still occurred on a regular basis, several times a week.

The ATFC was bustling because it was simultaneously a patient entryway, screening centre and distribution point. The logic of the centre's function, the patient flow and activities, wasn't immediately apparent, even to the experienced eye. It helped to have an interpreter to point out the key activities and pathways.

My guide would be the expatriate supervisor in charge of the ATFC, a voluble German nurse named Heiko. A sturdy, bald-shaven man approaching 50, Heiko was famous in Leer for his puppet companion, Mr. Smith, who gave the morning health education to the patient mothers at the feeding centre. At the start of each day, as the mothers gathered in the waiting area, the marionette Mr. Smith, his handler Heiko, and the matronly Nuer translator, Maria, would make their way into the waiting area to give crowd control instructions and sing songs about hygiene. His morning duties done, Mr. Smith would spend the rest of the day sitting or hanging on a post, keeping watch over proceedings, as Heiko busied himself with the obligations of a supervisor.

Heiko was the kind of informant anthropologists hope for. Like ethnographers themselves, Heiko was simultaneously an outsider and insider. A cheerful eccentric—evidenced, among other things, by the puppet, Mr. Smith—Heiko was also a thoughtful, energetic professional; he could explain program minutiae but was equally able to see the work in a broader context. His experience, skill and quirky humour made him appreciated by staff and patients alike. As the in-charge of the outpatient feeding centre his insights were central to my own work. He was proud of his program and eager to talk about it.

Heiko's job as in-charge was manifold. His primary duty was to oversee the nutritional and medical assessment of the children and the distribution of therapeutic food. He was also responsible for the collection and analysis of program data. In addition to this, there was health promotion, storekeeping, order management, staff training and supervision. The ATFC had a hierarchy. Heiko had sub-managers in charge of each of these duties. His key aide was his counterpart, James Gatlow, the assistant supervisor, a rangy, hale Nuer man from the local community. Ultimately, however, it was Heiko charged with the safe and smooth operation of the facility as a whole. To ensure all these things were done (quickly and with quality) was no easy task. Heiko not only needed to be expert in the clinical diagnosis and treatment of paediatric malnutrition, he also needed skills in public health, data management, logistics, staff management, facilities management, and—of key importance—knowledge of MSF operational norms and principles. Like most of MSF's fieldworkers, Heiko had a varied background and brought some of these skills to the job; others he had learned with MSF over the course several missions. Because the job requires sundry talents, seasoned MSFers were jacks of many trades. Nurses would come to know a great deal about logistics and medical supply management; technicians would become lay-practitioners of public health and water management; doctors would practice across a wide range of specialties, from gynaecology to infectious diseases. All would become people managers; supervision and training would often eclipse time spent in hands-on clinical duties, a fact that often surprised new expats who arrived with a different vision of their role. A bitter complaint I heard in my own time as a Head of Mission was that the nature of the program forced nurses to do HR management instead of nursing.

Heiko and the Machine: Clinic Management in Complex Emergency

Heiko was among the first expatriates to return to Leer in the wake of the conflict. While MSF returned to a hospital that had been almost completely gutted, the original ATFC was 100

meters distant from the main hospital compound and made largely of brick and mortar. The fires that took much of the hospital and the town itself had spared this place. That was fortunate, because the program was overwhelmed with patients in the first weeks. The team enrolled 800 patients on the first day of services; hundreds more would follow in subsequent weeks. It fell to the nurse in-charge to make sense of this human flood.

Heiko would prove to be well-fitted to the job. He would joke about his German flair for organization, but he applied rules of operational efficiency to the ATFC. ATFC should run like a machine, he insisted. And the Machine would become the metaphor he and the staff used to refer to the program. “How is the Machine? Is the Machine running?” he would ask. “The Machine is running!” others would reply with merriment. Each person was a part of the Machine and each had a role to play in the smooth operation of the Machine. Schedules and routines were essential. Along with James, the senior Nuer clinician, Heiko spent time with each unit, observing, coaching and adjusting. Much of the team was new—having been hired after fleeing to Leer from other parts of the country—but they learned quickly. The MSF protocols were simple and straightforward to enact.

As might be expected, the Machine encompassed not only staff roles and responsibilities but the physical layout of the facility as well. There was an entry and reception area, a weighing and measuring area, consultation rooms and distribution point. None of this was immediately obvious. Unlike hospitals in the UK, there were no bright coloured signs, arrows or dotted lines to point the way. Amid the cluster of ramshackle buildings—a tent, couple of shipping containers and several huts built of sticks or cinderblock, staff would orient new arrivals and insist that they follow a specific pathway to care. Stragglers would be questioned and directed. On the first morning of my arrival I was mildly disoriented to see Nuer mothers and children standing in single-file queue in the middle of empty space, as if waiting for a London bus.

They've learned that this is the quickest way to get through, Heiko informed me. The dictates of the Machine extended to the patients as well.

I made this first visit to Leer's ATFC on a bright morning in June 2014, the day after my hospital tour. I walked with Marc, the MSF Head of Mission who was in turn followed by the French camera crew. We found the ATFC busy, but not over-crowded. About 200 mothers accompanied by approximately twice that number of children assembled in an orderly way and entered the waiting room snake (the snake is an adjustable rope barrier that dictates patient flow—like the roped corridors we encounter at banks or airport checkpoints).

The group was clearly accustomed to the process; they filed in and sat expectantly on reed mats awaiting the health education messages that would be followed by the instruction to proceed to collect the children's Plumpy'Nut rations. As the mothers settled on the ground, the camera crew spoke to Heiko, who carried Mister Smith, the large health education marionette. The media men filmed the education session, as Heiko, through Smith, through Maria, the matronly translator, sang songs about hand-washing. The mothers laughed, sang and clapped along. The media crew filmed it all, then applauded and asked for the last chorus to be repeated, so they could get a better angle. I inched to one side, towards the corner of the waiting area. I wanted to be outside the shot. The camera filmed: the white man with his puppet, working through a translator, to give song-instructions to the assembled mothers, seated like school children in a rope channel. Playing our part, Marc and I looked on, with big smiles, arms folded, looming like benign overseers. My smile was forced and I was distinctly uncomfortable. Beside me Marc, who had trained in political science and international relations, must have been uncomfortable too, because he leaned over and said the thing I was thinking. He gestured to the burnt chain-link, the stick-cage waiting room and the rope barrier preventing the mothers' exit,

“it really is like a prison” he whispered. I nodded and leaned in to reply that Foucault had a lot to say about clinics and prisons. Marc laughed.²⁶

Following the health education singsong, the rope barrier was opened and the mothers were allowed to proceed in small groups. A half-dozen mothers with children in tow would move into line, while the rest waited quietly on the reed mats. The first stop would be the measurement station, where young Nuer paramedics, newly trained in the job, would take a child’s weight and compare it against their height, noting the numbers and drawing a line on a chart in the patient notes (patient charts will be discussed in more detail in Chapter 5). Any weight loss—generally indicative of a sick child—would be flagged at this time. From the measuring station mother and child would transit to the medical consultants (who were generally nurses or nurse assistants, entirely trained by MSF, since members of the community had no way to access medical school at this time) who would inquire about the child’s progress and briefly assess their health. They would often write a prescription or, if need be, a referral note to other departments in the MSF hospital.

The final stop on mother and child’s transit through the ATFC would be the Plumpy’Nut distribution point. The consultants had previously calculated the number of Plumpy’Nut sachets the child required according to a standard formula, thus it remained for the distribution staff to deliver the appropriate amount. On the day I arrived the about 60 red and white cartons of Plumpy’Nut sat stacked under the veranda, and a group of three or four staff worked to keep the distribution line moving, counting the sachets and dropping them into plastic bags, handing the bags off to the mothers, counting the amount again if needed, and marking the patient card with the quantity delivered. Now-empty cartons lay scattered about, to be dealt with shortly; the

²⁶ For a critical view of Foucaultian perspectives on supplementary feeding see Scott-Smith 2015a:26-36.

empty boxes would be crushed for burning, or just as often, scooped up by mothers or older siblings, and balanced atop heads to carry goods home.

From here the mothers, children in tow, would exit the way they came, heading home or to the market. All of the mothers traveled on foot (all of the MSF staff traveled on foot too—their LandCruisers having been looted months previously). Many lived nearby, within a couple hours walk, but some would come from much further away—I would find it relatively common to hear of mothers making an eight or nine hour journey from Koch or other distant parts of the Nuer homeland.

Because the children needed to be weighed and measured at regular intervals, the Plumpy’Nut supply was intended to last two weeks. The team might make exceptions for those coming from very far. The mothers might or might not manage to return in due time. Leer was a regional centre; those coming from afar overnighted and attempted to combine activities—trading in the market or visiting relatives, perhaps to ask for a loan.

Sometime later, as the Plumpy’Nut distribution continued, I heard, far in the distance the tell-tale whump of giant helicopter blades. The aircraft would not be visible for some time, but I knew it was probably a UN Mi-8, and probably destined for Leer. The thump grew louder as the helicopter slowly approached the town and hovered around looking for a landing spot. I went to the fence to watch the magnificent beast for a time, and the French cameraman happily scampered out into the field to film the landing. The crew must have spotted our white faces and decided their aid cargo was intended for our facility (it was actually destined for an agency up the road). The pilots flew in low and close, blasting a wall of air ahead of them as they made their descent directly in front of the ATFC, only 10 or 15 meters from the gate. It seemed

unnecessarily close and needlessly reckless.²⁷ The noise and wind-roil was tremendous. It sent animals scattering, roof sheets shivering and clouds of debris flying. The stick buildings shook and threatened to blow down. The staff wedged boxes of Plumpy’Nut against the blast and I had a nightmare vision of sharp metal roofing sheets tearing off and tumbling through the ATFC. I turned against the dust and retreated further to the interior of the compound to shelter from the wind. In the whirl of dirt and noise Marc approached, banged his pointed finger against his skull and shouted to me “What is he DOING?! Is he completely FUCKING CRAZY?!” I shrugged and shook my head. “I don’t know!” All around us, the mothers and children stood or sat and hardly remarked on the tempest at all. Some held their dupattas against the dust, and a few turned their necks to watch the landing with casual disinterest. Most ignored it. No one broke line. I was bewildered.

In my notes and in the following days I reflected on the ATFC and the arrival of the helicopter. With the exception of the proximity of the helicopter landing, my first 24 hours in Leer had been typical of short project visits frequently paid by aid officials. Marc, Katherine and I, with the camera crew in tow, had done a whistle-stop tour of issues and facilities. Our passage was evocative of what de Waal (2005:20-23 [after Chambers]) would term “disaster tourism.” We stopped long enough to gain an impression, to ask rudimentary questions, to see and be seen.

This touch-and-go method of qualitative analysis is typical of many emergency interventions. Initial intervention decisions are often made on the basis of “rapid assessment” (a hasty qualitative survey with some quantitative aspects where possible) and little else. While the longer-term presence of a field hospital ensures some continuity, senior decision-makers, based in the capital and HQ, can generally only manage short, one- or two-day visits. Thus their first-

²⁷ I know next to nothing about aviation, but reckoned the Mi-8 pilots cut things deliberately close to test their skill. In Bentiu, I would see an Mi-8 take off in a low hover from the airstrip, then veer ahead fast and sharp, cutting a swath only five meters above the airstrip’s massive fuel tanks. To my eyes this was a remarkable manoeuvre: both skilled piloting and an enormous, avoidable risk.

hand knowledge of the site remains impressionistic; what they know, they know primarily through numbers and text, and conversations on the phone, or with staff members in transit to or from the place. A project visit puts an image to the numbers. Given the urgent and often impressionistic nature of emergency work, importance and pre-eminence of numbers becomes more apparent.

de Waal argued that the nature of disaster tourism could lead to misperception or over-emphasis of the magnitude of disaster and the threat to livelihoods. But in the case of Leer MSF's misapprehensions seemed appropriate. The weeks I would spend afterwards in Leer would strengthen, rather than dampen many of my initial foreboding of disaster. The community *was* on the verge of famine, and nothing would change the indelible image of the burned hospital.

My impression was of the MSF hospital as a hub of uncertainty. The hospital and ATFC were a centre of activity, addressing needs as they saw fit and as they appeared. At the same time the hub threw narrow spokes into distant places to assess the situation out there, beyond the threshold of the program. Provision of medical care here and now was only part of the hospital's role. The hospital also served as an assay: one that could translate the subjective experiences of practitioners and patients into numbers that could be digested by the Machine. The Machine was a medical technocracy, each translator, measurer, clinician, stockist and enumerator a functionary within that technocracy, dedicated to the care and careful tallies that produced both effect and knowledge.

The medics' action, and the action of the ATFC itself produced a reflexive return of information and intervention. MSF's reason for being and its presence in Leer had brought this matter of concern into being (Latour 2004:232). The system and systematization put matter and

experience into place. The ATFC as a whole functioned as a kind of inscription device (Latour and Woolgar, 1986:51). Despite its comparatively minimalist infrastructure, the ATFC demonstrated a rational, efficient, technocratic administration of medicine. The rope barriers and stick buildings were rudimentary. From these ramshackle structures an observer might mistake MSF for a shoestring NGO of limited resources and capabilities. But this was far from the case. While the clinical infrastructure appeared minimal, what was not visible was the enormous transcontinental apparatus—the network of technology, history, knowledge, values and circumstance—that made it possible to assemble and airlift one hundred thousand sachets of Plumpy’Nut to Leer in the first place.

The confluence of factors that built the ATFC may have been far from the minds of patients and practitioners. Yet the existence of this sophisticated measurement and distribution centre was a tangible manifestation of the material semiotic in practice: interlaced forces of knowledge, history, and technology composed and nurtured the very existence of the ATFC (Martin 2012:25-26).

The hospital was a mobile, medico-technical island sovereignty (Appaduari 2003 [1996]:342). The ATFC as a whole was a kit, of sorts (Redfield 2013:71,88-90). Brought by air, structured after a template, the materials and knowledge that built the ATFC had simultaneously defined the problem and solution (Pandolfi, 2000:31). The nature and purpose this modular assemblage was not lost on the more thoughtful members of MSF; speaking in interview Rony Brauman would call the MSF template “an apparatus, in Foucault’s sense.” (Redfield 2013:90).

Thus MSF’s presence and means of operating in Leer could be characterized through permutations of other people’s theories. While I considered this I thought about something else that I had no explanation for. I wondered how it could be that the mothers and children were so

accustomed to the aid machine that the arrival of an actual ten-ton flying aid machine in their midst elicited no response. Whether or not the local people had a deep awareness of the transnational machinery that had deposited this feeding centre in Leer, they were certainly accustomed to it. While the arrival of the helicopter sent expatriates scurrying, it hardly elicited a reaction from the mothers and children. The utter disinterest seemed likely due to habituation to the techniques and machines of the aid apparatus, but the clinic also demanded conformity. Sixty years of civil strife, and an even longer history of foreign intervention might habituate people to methods and Machines from far away. But habituation does not spontaneously make a London bus queue appear in Leer—this was part of the work of the Machine.

It was not only the Machine that would shape people. People too would shape, sharpen and even trick the Machine. The next section considers how measurement is essential to MSF as an institution—how numbers render individuals legible to technocracy (Scott 1998:22-33)—and how, without adequate care, numbers can mislead.

Theory and science of measurement for under-nutrition in an emergency setting

Anthropometry for malnutrition compares individual patient measurements to those of a reference population. The severity of illness can at least partially be determined by where the individual patient falls in relation to an average.

MSF uses two anthropometric procedures to measure malnutrition. These were briefly introduced in Chapter One; they are the MUAC tape and the weight-for-height board. While both are made for use in extremely rudimentary conditions, they are nevertheless applied scientific technologies, the product of generations of research. These technologies are made to

streamline the process of admissions, but they are also diagnostic technologies, as well as progress markers and discharge criteria. Yet because anthropometry is a statistical technology, it is subject to probabilities. Occasional outliers will be misclassified. Anthropometry is an aide to, not a substitute for, professional discernment. Thus clinical judgment comes into play. Patients can also be admitted on the basis of clinical diagnosis, usually in the form of bilateral oedema—characteristic of Kwashiorkor (Briend 2009: 193-194).

Of these two anthropometric techniques the MUAC tape is perhaps the more iconic and, in the eyes of many practitioners the more robust. MUAC stands for Measure of Mid-Upper Arm Circumference. This is exactly what it sounds like: a clinician applies a tape measure to the circumference a child's middle upper arm. Barring anomaly in the form of significant anatomical or syndromic variation, the measure accounts for the presence and development of fat and muscle, thus forming a reliable gauge of nutritional status.

MUAC needs only the simplest technology: a measuring tape, paper and a pen. The measure can be taken in the middle of the street, if needed (see Redfield, 2013:23-24). It gives an instant and accurate assessment of the child's nutritional status. With a modicum of organizational skill aid workers can measure hundreds of children in a single day: on the first day of their return to Leer MSF enrolled over 800 children in their nutritional program. While the procedure can be done with a plain tailor's tape, purpose-made MUAC bands are printed with a coloured red, yellow and green scale to reduce the possibility of error in admission.

The second technique, weight-for-height measurement, is slightly more complicated and requires a more organized routine, yet the measurement procedure and physical apparatus are still simple by the standards of biomedicine. A child is measured for length while standing or laying against a height board (a plywood vise with a measuring tape glued on one edge:

essentially, a child-sized calliper). Then the child is weighed on a Salter scale, a robust hanging-hook scale of the kind used to weigh luggage. Clinicians compare the child's height and weight against charts specific to age and gender. These plot the child in comparison to the length and weight of an average, healthy child anywhere in the world. Thus the child in front of us is graded by proximity to a statistical norm. The further from the statistical norm, in terms of standard deviations, the more critical the child's condition. Children below two standard deviations are considered moderately malnourished; those below three are severely malnourished. MSF takes on only the worst of cases. Because the agency focuses on the most severely malnourished, the program only admits children of Z-score -3, that is to say, approximately three standard deviations from the mean (Briend 2009: 193-194).

MUAC and weight-for-height are used almost exclusively for children under the age of five. There are several reasons for this. First, for the initial five years of life childhood growth rates and physiology should (given a salubrious environment) remain fairly uniform across the globe, whereafter biocultural and environmental factors play a greater role (Ulijaszek and Komlos, 2010:188). Thus, more than other age group, very young children can be reliably measured against a standard reference population. Any deviation from this norm can normally be traced to undernutrition (though the measure itself has little to say about the causes of that undernutrition, the practitioner can draw conclusions from the clinical history the measure itself). Second, because of their high energy and nutrient needs and proportionately lower energy reserves (after the first two years of life), young children are more vulnerable to undernutrition: food scarcity affects children first. As such, children under five are a nutritional bellwether: their status is a good indicator of the nutritional status of a population in general (Ulijaszek and Komlos, 2010:188-189, 192-193).

The power of MUAC and the weight-for-height Z-score is threefold. First, the measures lend themselves to robust protocols that can be deployed anywhere in the world with minimal equipment and training. The physical technology is simple: a measuring tape and a scale. The people taking the measurements can be trained within the space of half a day. The protocols, techniques and the numbers they produce have broad applicability. Second, they are age-independent within the window of 6-59 months. An accurate account of age is often an impracticality, if not impossibility, in emergency settings—thus anthropometric measures commonly used in global public health, such as weight-for-age and height-for-age, are of little use in nutritional emergency. Third, these two metrics are life-saving. It is a safe bet that, without intervention, a child in a red MUAC or -4 Z-score will die (Briend 2009:193-194; Schroeder and Brown 1994:569, 572). Thus, as outlined in the first chapter, nutritional anthropology functions on three levels simultaneously. At the clinical level it offers a diagnostic of individual bodies, at the public health level an assessment of population nutritional status and at the level of global health and the body politic it is a measure of emergency.

In situations of urgency and uncertainty, these specific nutritional technologies give MSF clarity to triage and treat the most severe cases from among those presented. Children in red zone are MSF's demographic focus. It is hard to argue with this seemingly unambiguous and apolitical choice to treat on the basis of need. In the words of one of MSF's former presidents, also one of the early leaders of MSF's medical focus on nutrition, "Is it too much to ask for milk, sugar, oil and vitamins for sick children?" (Bradol, 20009:222).

The MUAC and weight-for-height board seem to offer clarity. Yet the scientific investigations that underlie them are nuanced and far from resolved. Similarly intricate are the moral calculations that lead us to intervene through measurement. The knowledge that underlies the practice of anthropometry stretches back decades, if not more than a century. So too do the

ethical debates that led to anthropometry's employment as a tool of social welfare (Ulijaszek and Komlos, 2010:183-184, 190-191). Nutritional anthropometry in a medical humanitarian setting is a distillation of scientific knowledge, humanitarian sentiment and clinical practice into a single object: a band of coloured plastic that encircles a fragile arm.

The apparent simplicity of the MUAC band when contrasted to its underlying networked knowledge and technological subtlety make it “good to think with”. The MUAC both embodies in itself and enacts on other bodies certain kinds of knowledge and morality. It is not alone in this, but joined by similar processes and practices in basic medicine, field logistics and human resources; each a standardized technique that forms part of MSF's humanitarian kit, the previously mentioned “portable map of frontline medicine” (Redfield 2013:89) that enables rapid, highly mobile response. This clinical collective, skilfully coordinated, makes MSF's response possible.

While icons like the MUAC tape or the field hospitals feature centrally in media and promotional materials, there is a vast and unseen apparatus behind them. Every speciality and practice within the organization has its own in-house advisors and consultants. In addition to advising on programmatic matters, these technical specialists spend much time reviewing research, developing their own studies and revising protocols in light of emerging evidence. MSF protocols are based on, and at times elaborate upon, global standards established by the World Health Organization and other international health actors such as the International Committee of the Red Cross (ICRC). The aim is to ensure that MSF treatment, in remote places like Leer, is done according to international standards.

Yet standards can be problematic. Despite attempts to clarify standards of practice through such things as clinical protocols, MSF works in non-normative environments, places where

experience frequently falls outside averages and expectations. The global reference populations that define what is average and expected for childhood growth and nutrition come from stable environments, where nutritional and healthcare needs are fully met. In establishing the World Health Organization (WHO) international growth standards, mothers and children were selected from among the healthiest subsets of global population in order to demonstrate human growth patterns under optimal conditions (de Onis et al. 2009:48, 50). To classify the world's healthiest bodies as normative is arguably a boon to public health and nutrition programs in economies of abundance, where the standards project attainable growth targets for all children. In situations of chronic or acute food scarcity these idealized growth standards may not be attainable; stunting in particular can be general in a population (Dasgupta et al. 2013: 154-155).

This does not make international standards irrelevant. While the ideal may be unattainable, it still serves as a marker of comparison. Over time, population nutritional health can move closer to or further from the ideal. A population can still be compared to itself, individuals can be compared to the local population, and children still grow along a similar trajectory, regardless of their relation to the mean. International growth standards assert what child growth should be; population measurement shows how it is, or has been through time (de Onis et al. 2012:1604).

Just as human bodies can make a problematic match with growth standards, so there can be variability and uncertainty in measurement techniques. As with any process of scientific measurement, relative accuracy and precision are subject to scrutiny.²⁸ While WHO considers Weight-for-Height to be the more robust field diagnostic, many members of MSF participate in an ongoing technical debate that considers whether, under certain situations, MUAC alone may be sufficient as an admission diagnostic for therapeutic feeding (Goossens et al. 2012; Ali et al. 2013:319; Grellety et al. 2015:2575). The investigation is fuelled by the reality that, despite its

²⁸ See Ulijaszek and Kerr (1999) for a detailed consideration of precision, accuracy and error in nutritional anthropometry.

minimalist character, even Weight-for-Height is impractical in certain emergency situations. A senior MSF nutritionist explained the issue to me:

MUAC is easier, it frees up health staff in real emergency situations ... our national colleagues, they learnt a way to do it and they're good at it. ... I still think MUAC is a preferred thing. It's unavoidable [with Weight-for-Height] that kids in those scales, they're always wiggling around, so the health worker is kind of like trying to eyeball where the weight is. They squirm around on the height board, ... So even the Weight-for-Height is kind of, in some regards, ridiculous because if you misjudge where that needle is going back and forth, and then throw on top of that 400, 500 emergency cases [measurement error becomes significant]. I still think MUAC is preferable and we can divert some of the health skill towards other areas like combining vaccines with nutrition programming (Interview with UW 2014-08-17).

Thus MUAC may be preferred in situations where workload is very high and the team short-staffed.²⁹ Of course, MUAC is subject to error too. Observer error is probably the most common source of unreliability in anthropometric measurement (Ulijaszek and Kerr 1999:166). For example, the measurer may hold the tape too tightly or too loosely, tiredness or caseload may lead to misreading.

Because the quality of measurement impacts directly on the reliability of the data overall—and thus the perception of crisis—there are standards within standards: attempts to define what constitutes acceptable degrees of error in anthropometric measurement (Ulijaszek and Kerr 1999:165-166). When they have been formally tested, degrees of errors in MUAC and weight-for-height measurement generally fall within an accepted international standard (WHO Multicentre Growth Reference Study Group and de Onis 2006:38, 42-45; Saeed et al. 2015). Anthropometry works; but it is in large part operator dependent—error is a product of the quality of training, care and attention.

²⁹ The debate extends to consider whether MUAC alone may be sufficient to define admission criteria in non-emergency settings as a tool for community-based screenings (Ali et al. 2013:319-320; Saeed et al. 2015).

Thus in the MSF setting much of the day-to-day work of Heiko and James consists of monitoring and coaching measurers and clinicians in their work. As with other aspects of MSF's emergency practice, the aim is not to achieve extremely high precision, but a technical quality deemed "good enough". Resources invested in training and research must equal increased benefit in terms of clinical outcomes for patients. The calculus between effort invested and benefit accrued is tenuous and ever-present.

This chapter illustrates that there are a wide range of bodies and experiences that are not counted in global norms, but that may be normal in the context of a particular place or time (Lock 2001:483-485). Undernutrition manifests in ways that can diverge substantially from expected global norms. This manifestation is a product of a combination of genetics, environment and social expectation (Ulijaszek 2006:279-294). In a similar way, the technicalities of measurement impact significantly on how bodies and phenomena are perceived (Ulijaszek and Kerr 1999:165-166). This is especially true in situations of emergency.

These problematic characteristics of emergency are no news to aid workers. They have long been aware of it and have attempted to reconcile it in protocols and practice. The next section examines what happens when local realities confound standardized measures. With the help of a shy Nuer child we can start to see the limits of care by the numbers.

Nyajuma (Our Girl Friday)

One morning in late July, I am again at the ATFC. The place is slow to pick up. It's a Friday, after heavy rain overnight. The rain is usually what keeps people from coming, explains Heiko. We will still see 200 patients today, he says, but they will mostly be patients of Z-score -3 , not

–4. So this is indicative of a stable situation. Even those coming from very far away come with Z –3, so they are also not too badly off, which indicates a somewhat stable situation out there too.

Many weeks have passed since the initial overload. Air drops of food and the community's own agricultural efforts have mitigated the dearth somewhat. People are still hungry, but the spectre of famine no longer hovers so close as it did in April and May. Aware of this, Heiko reads the situation both into and from the ATFC numbers. He is able to predict the day's workload based on previous trends and last night's weather. He makes logical inferences about the nutritional status of the population based on who presents at the ATFC. Although he cannot visit distant communities, he deduces their situation: children of Z-score -4 have, for the most part, been enrolled in ATFC or have already died.

I lean against the wall sketching the buildings as Heiko speaks to another nurse. We are watching the patients and their mothers come to the weight/height measuring room. A small knot of children come from registration, accompanied by two mothers; both women have the characteristic Nuer build: long and muscled. There is a rhythmic sway in their walk. Among the youngsters, I spot a tall child that must be a caretaker or sibling—or so I think—until her mother tells her to remove her frock for the weighing scale. The girl has knobby knees and thin legs; she is lean, but not skinny and otherwise appears healthy and alert. She has bright eyes and skin. Unlike most of the younger children, her clothes are clean, there are no flies around her, she is not covered in dust and her nose doesn't run. And she strikes me as very tall. She looks to be six or seven years old, where the MSF cut-off age for ATFC is five years.

I point this patient out to Heiko. “She looks to be more than five years old,” I say. Yes, perhaps. But it's sometimes difficult to tell, Heiko explains. The children can be very tall for their age. Let's call James and see what he thinks, says Heiko. James, the Nuer ATFC supervisor joins

us and agrees, yes she could be five or six—no way to tell, except maybe the teeth. We wait as the girl is weighed and measured for height. James assists the measurers. “How old is the child?” we ask the measurer to ask the mother. Question and answer are sequentially relayed. “three or four years” comes the mother’s answer. Heiko fails to stifle a laugh of disbelief.

We look at the girl’s registration card (not a printed card, but a hand-drawn chart, made in pen because the ATFC have been awaiting more cards for weeks). We will call her Nyajuma (literally translated from the Nuer language [N’ath] this means Girl-Friday or Daughter-of-Friday, i.e. girl born on a Friday). She is registered as five years old on the card. Her weight was 14.2 kg on 4 July (registration), 14.8kg on 11 July, and is 15.8kg today, 25 July. A total of 1.6 kg gained in 21 days. That seems positive, but we don’t know for sure. In the three weeks since she joined the program she has grown a half a centimetre. The old target weight no longer applies. We need to consult the weight for height chart in the protocol.

Gathering around the chart, we see that the target weight has increased to beyond 17kg. And there you are, says Heiko. We can keep feeding her and she will keep growing, but because of her body structure we will never reach that target weight. We can keep her in the program until mid-2015, and she won’t reach target weight, he says.

Nyajuma leans into her mother’s skirts, timid at all the attention; her mother holds her shoulders. Both females are different sized versions of the other; her mother stands at my height of six feet. Well, let’s see her teeth, says James. He bends and lifts apart Nyajuma’s lips to inspect her teeth. Her teeth are all there, bright white and healthy. They look like milk teeth. From six to seven we would expect the child to start losing the milk teeth, says James, so she is probably somewhere around late five.

I ask permission to follow mother and child to the consultants. Apart from complaints of a fever at night the child has been healthy, with no diarrhoea and a good appetite.

So what to do with Nyajuma? Heiko and James explain what will happen: she is healthy, but in the numbers she will be categorized as a non-responder, since given her build she will never gain enough weight to reach the target weight-for-height. They agree that she should stay in the program for another two weeks, and then, in the absence of weight loss or serious morbidity, she will be discharged as a non-responder.

The majority of malnourished children in the program are between the ages of six months and three years. Nyajuma is older than the majority, but she is not unusual. Heiko explains, childhood weight for height measures become increasingly unreliable around the age of five, as children's growth rates begin to vary widely. Nuer people vary in height, but can be exceedingly tall. Heights over six feet, if not the average for men, then at least are extremely common. Women too approach and often exceed six feet (one of my young informants stood 6'5"; her height elicited no remark from her peers). All Nuer people tend towards slimness; this is partly a function of their height, partly genetics, partly diet and partly the pastoral lifestyle that involves a great deal of long-distance walking. This can skew measurement of malnutrition, because quite healthy children like Nyajuma, probably late five but tall for her age, show on the charts as acutely malnourished.

Heiko explains to me, Nyajuma probably is undernourished, along with nearly every other child and adult in the vicinity. But, he asks, is she dangerously undernourished or just a tall child who's growing fast? "So in the end, what is really malnourished? Where does it start? What do we need to respect with regard to ethnic group?"

This was not a new discussion.³⁰ Heiko and I had carried on the conversation over several days and through several such cases of outliers and exceptions. It was also not a new discussion for MSF. The case of Nyajuma personifies many of the dilemmas and ambiguities that confront aid workers on a regular basis.

The WHO launched revised global nutritional standards and reference populations in 2006.³¹ The previous nutritional standards had remained in place since the 1980s (de Onis et al. 2009:48-49). Revision is not a simple undertaking; global growth standards are biologically and politically complex. International consensus can take decades. The new standards had been in process since 1994 and thus the 2006 implementation represented a major achievement (Duggan 2010:14). The new standards aimed to provide a reliable and meaningful comparison of childhood growth patterns “irrespective of ethnicity, socio-economic status and feeding mode” (de Onis et al. 2012:1607). Yet it remained well-known that even the new global standard was difficult to apply in certain parts of the world (Duggan 2010:5; de Onis et al. 2012:1607). This was in part due to technical implementation; it relied on high standards of numeracy, training, access to computer-based calculators and distribution of multi-coloured growth charts, measuring devices and other materials (Duggan 2010:10-11; de Onis et al. 2012:1607). But it was also due to changes in the growth trajectories between the previous and present reference populations. Minor variations in these references meant that using the preferred method of measurement (weight-for height and Z-score) could result in up to four times as many children classified as malnourished over the

³⁰ The effect of ethnicity (genetics) on growth patterns has been debated for decades. Starting from the 1970s, the consensus has formed that environment (most centrally, the interaction of nutrition and infection) is the major determinant of growth prior to adolescence while genetics takes on an increasingly role in adolescence. This is particularly true for children under the age of five (Habicht et al. 1974:611; Cameron 1991:231). This is the source of anthropometry’s power as an assessment of nutritional status in young children—but that power diminishes as the child ages.

³¹ The distinction between *standards* and *references* is important. As noted above, standards attempt to capture optimal growth patterns—they are therefore a target or exemplar—while the reference is a relational tool that compares individuals and populations to a single, international referent cohort, without the implication of ideal type (Duggan 2010:2).

previous curve. This has implications both for calculation of the public health burden and for clinical management strategies (Duggan 2010:8).

Thus MSF and NGOs like it struggle with global norms they as relate to local realities, where populations often live under distinctly abnormal conditions. The question of nutritional assessment is only one among many such quandaries in the broader endeavour of humanitarian medicine.

The case of Nyajuma brings the problem to a personal level. The numbers say she is starving but the practitioner's sensibility says she is not. Nyajuma's individual case calls for individual attention. The solution the clinicians prescribe—continue for two more weeks and then discharge—is likely satisfactory to no one, but good enough for most everyone. A public health functionary concerned with maximum benefit for money might like to see Nyajuma out immediately, in favour of more needy patients. Heiko and James would like to see Nyajuma discharged as “cured”. Nyajuma and her mother would likely want to extend participation in the program indefinitely—the Plumpy’Nut is a vital supplement to household diet. The proposed solution to treat in the short term without expectation of cure might be said to be representative of humanitarian medicine at large. Her individual biography will not be reflected in the numbers, where Nyajuma will be stamped as a “non-responder.”

Nyajuma's case highlights a further dilemma regarding all the cases the practitioner does not see, but just reads in the data as Heiko did that morning. On the basis of a few presentations entire regions are judged to be “stable”. This blanket assessment is good enough for now, because in any case those faraway locations are inaccessible to MSF. And they will remain inaccessible, unless significantly alarming events prompt critiques of the idea that they are

inaccessible. Heiko re-emphasizes his point: in any intervention, he says, there are “the dynamics in the details, changing sometimes the direction.”

Disrupting the Machine

One evening, Heiko returns to the MSF office and calls to me from the water filter in the dining room. He has stories for me. I’m happy to have Heiko looking out for my research. I sit on the office steps with my notepad as the sunlight fades and he joins me with a big cup of water in his hands. He pauses and drinks deeply.

Today we had a girl, 12 years old, come to the ATFC from Adok, 25 kilometres distant. She was carrying a child of one year old and came with a blue card for a three year old. Obviously, Heiko explains, a one year old presented with the registration card of a three year old makes for wildly different height and weight. They quizzed the girl and she relented: the mother had told the girl, “take the child and make the best of it.” See what you can get.

The 12 year old walked 25 km with the baby in arms, on the chance that they could get something from MSF. Yesterday there were two cases where they referred two children to the inpatient feeding centre and the two mothers refused because they have other children at home that they need to care for. Their babies were acutely ill but they couldn’t manage a hospital admission. These are typical stories, says Heiko. “Over the month you will find 10, 20, 30, 40, 50 cases like this.”

Heiko explains to me, “There are also micro-reasons why hunger and malnutrition take place.” Each one is unique, but there are so many of them. When you think what these must amount to in the aggregate, you get an idea of how the numbers cannot tell the whole story.

He returns to his opening vignette. “So we sent this girl home.” The 12 year old went back to Adok with nothing from MSF, because we could not admit the child based on any criteria—the baby was healthy—and because for legal reasons no children can admit children. A 12 year old can’t make a decision for referral or take instructions on how to give a prescription. There have been cases in past, he says—without much elaboration, and it always comes back to MSF. If something goes wrong it will always be put on MSF. Anyway, were we to give Plumpy’Nut to a child caretaker, Heiko continues, “the child isn’t three minutes out of the gate and the other starts eating the Plumpy’Nut.”

Heiko’s voice reflects a mix of admiration and frustration as he exclaims, “And they tell you this straight!” He emphasizes his point with a punch to the air. The mothers will tell us it’s one for the mother, one for the other children and one for the patient. The mothers are tired. They are expected to give birth to so many children, and work in the fields and attend aid distributions. They have no time and this pre-packaged therapeutic food is a labour saving device.

Heiko is on a roll now, tired after a long day he’s eager to blow off steam. He continues talking, faster than I can take down notes and quotes. He tells me, we had recently another case of two mothers who came, one was from 30km away and the other was from Koch, nine hours walking. Their children had been discharged as cured. They both came with blue cards with DISCHARGED written in big, black letters on the card. The kids were way overweight, they met none of our criteria for admission. We re-explained to them the discharge criteria and why their children were considered cured. And because they were insistent and had come so far, OK, we gave them 14 Plumpy’Nut each. And they complained that it was too little! Heiko says, you wonder if they are stupid, or if they are clever. Their attitude is you are giving, so “give me.” Heiko thrusts his open palm under my nose.

“So there are the stories all around. They might not be important in detail, but they pile up.” He says, these stories go into the “other” category of the statistics. You think that there are eight million people in this country and half of them are children under 16 and if even 5% of the cases are like this, how can you tell what the situation really is?

These anomalous cases, which weren’t really anomalous at all, were referred to by some practitioners as “social problems.” Social problems were local realities that the science of clinical numbers could reveal, or insinuate but not penetrate. Such anomalies were perhaps visible in graphs or statistics but could only be explained with clinical history and managed with social intervention. This part of the job was acknowledged as essential—there were individuals and teams dedicated to such “social” activities such as patient counselling and defaulter tracing. There was no doubt of the role the social played, it just was not readily measured in the numbers.

Heiko’s lament, “stories all around ... they pile up”, made sense; even if only 5% of the cases were like this, they would still obscure the picture of undernutrition and food availability. Depending on prevalence, social problems could greatly affect other numbers—potentially (but rarely) rendering statistics invalid. For example, how food is apportioned in the home affects children’s weight gain, which affects the program’s measures of success (i.e. number of patients discharged as cured versus discharged as non-responder or defaulter). It was known and accepted that Plumpy’Nut might be shared out among other members of the family; the ration calculations included an over-allocation for this event. But that rough calculus could not account for the myriad of factors and priorities at play in individual households and communities. Plumpy’Nut might be shared among members of the household, or used as currency to pay caretakers who cared for the other children while the mother was away. As Heiko’s narrative

showed, mothers might pursue a variety of strategies to obtain rations. An extreme of this—one I never knowingly encountered in South Sudan, but had experienced elsewhere—were mothers who deliberately underfed one child in order to access the feeding program (Crombé and Jézéquel 2009:8; Cooper 2009:162; see also Scheper-Hughes 1993).

Individual practitioners can see these anomalies in the numbers and sometimes explain or rectify them. The Machine—the institution itself, governed by numbers—cannot see them, and can be disrupted by errors in the data. Thus at all levels of the hierarchy, from bedside to headquarters, medical supervisors reviewed tables of data to read the narrative in the numbers, and interpret the context and social problems from the numbers and explain them in a format that would be digestible for the Machine, governed as it was by spreadsheets, graphs and standard indicators.

Weights and Measures in the Context of Emergency

This chapter has been an exploration of the central role of numbers—anthropometry, in particular—in discourse and decision-making in the context of medical humanitarian emergency. With specific ethnographic examination of an MSF field program, it illustrates the context in which numbers are generated and their immediate relevance to practitioners on the ground. It also illustrates how numbers are subjective and require practitioner interpretation to be made functional in the framework of a broader program. In situations of nutritional emergency the medico-technical apparatus both shapes and is shaped by people.

As the case of Nyajuma illustrates, one can be starving on paper but comparatively healthy in body. Or taken from another perspective, one can be healthy on paper—healthy by all of the Machine’s measures—and yet live in existentially precarious circumstances, as the one year-old

carried 25 kilometres by a 12 year-old sister. Most of the children of Leer, even if healthy on paper, live in similarly precarious circumstances.

Deployed with savvy in the context of crisis, weights and measures have extraordinary power. A simple plastic measuring tape, when seen with expert eyes and worked into data tables, has the power to predict famine. As Yates-Doerr pointed out in her ethnography of weight and measures (2013), this power functions in several ways. Measures can individuate—foreground the individual body—as they pluck the person out of the messy everyday environment to place them against a blank white canvas, where the body can be statistically compared against a mean. In this case environment, history, personality and biography are stripped away to reveal only physical attributes. How the individual body measures determines eligibility for care. In a similar way, measures can aggregate; this subsumes the individual body into a larger collection of bodies that obscures individual situations but that allows for insight into population dynamics (Yates-Doerr 2013:64-66).

What weights and measures do with less acuity is tell about the home, the village, the environment and lived experience—the so-called “social problems” these entail. This quandary is recognized by practitioners. “Illness is a personal and not a collective event” wrote Geoffrey Rose, “it happens to individuals, and statistics mislead by presenting only the totals.” (Rose et al. 2008 [1992]:65).

Skilled practitioners who are familiar with the setting can read the environment from the numbers, as Heiko inferred the nutritional situation in distant regions from the numbers in the ATFC. This ability to see texture in the data gives the practitioner insight. But, while they may be able to read social problems from the data, the practitioner’s ability to affect social problems is constrained within the boundaries of a technocracy of care that governs by the numbers.

The complex relationship of agency and constraint that plays between the practitioner and the institution was taken up by Mary Douglas. Douglas argued that individuals working from within institutions developed the tendency to default to the status quo; institutions both enabled and constrained the perception of the problem while simultaneously pre-configuring the solution (Douglas 1986:4). In this case, MSF framed the problem as one of starvation: a situation that comes with a pre-figured solution: therapeutic feeding in response to medical malnutrition. The response automates who counts and who is counted: children under five years old, with a Z-score of less than -3.

Were MSF a purely bureaucratic organization—driven by numbers alone—this response might have been sufficient. It would be considered adequate by certain public health or economic logics. Yet, while therapeutic feeding was the agency's prime response, practitioners did not feel it was enough. So in Leer, as elsewhere, MSF used its position as an authoritative witness to lobby for other actors—the UN and relief NGOs—to intervene too. These agencies duly responded. Yet their interventions too were largely material responses to a problem framed as displacement and forced destitution. This is characteristic of a disaster-response model that seeks to restore people's autonomy with the provision of staples—food, medicine, shelter, seeds and tools.

The Machine leaves aside people that, in other circumstances, would be considered highly vulnerable—such as children of Z-score -2 or the elderly or people with severe disabilities. It is also leaves aside questions of political activism and shies away from its own complicity in perpetuating the circumstances that lead to and prolong the same crises it rushes to address (de Waal 1997:65-85).

The drive for measurement is a product and function of a medicalized perception of acute malnutrition (Scott-Smith n.d.:1,10-13). This medicalized view frames acute undernutrition—in particular, severe acute malnutrition—as a technical problem that can properly be addressed through deployment of a rational, scientific medicine. The fundamental techniques of anthropometric measurement have not changed since the 19th century (Ulijaszek and Komlos, 2010:183); similarly, while clinical therapy of malnutrition has made major gains in the past several decades, it is ingrained in a medico-technical institutional structure that emerged from the intellectual roots of a positivist Victorian rationality.

From this perspective ATFC is an inscription device in the classic sense (Latour and Woolgar, 1986:51, 245). Inscription is not ATFC’s primary function—rather, inscription is done with the immediate aim of administration of medical therapy for undernutrition. But inscription is inseparable from that medical therapy.³² Weighing and measuring take the form of an “apparatus or configuration ... which can transform a material substance into a figure or diagram which is directly usable by members” of the institution (Latour and Woolgar, 1986:51). Much of what is done in ATFC is making bodies legible: visible to the clinical and bureaucratic gaze (Scott 1998:2,11).

To inscribe bodies in this format also prescribes the solution. If rapid, medico-technocratic diagnosis is needed to elucidate the problem, then a similarly rational, technocratic intervention can address it. The problem can be said to be resolved when it is no longer legible in the clinical gaze—the situation could be considered stable, Heiko noted, because no more children of Z score -4 presented. Proponents of the (medicalized) emergency approach to malnutrition do not hold a reductionist view; proponents do not deny that undernutrition has complex political,

³² It is possible to administer food without extensive inscription—simply give all the children Plumpy’Nut or similar—this is what is known as a blanket food distribution. But it is rarely done; the practice is not favoured for a variety of reasons, including questions of expense, dependency, abuse and efficiency (Rossi 2009:120-121).

economic, environmental and social roots. Rather they argue that the resource and expertise intensive medical-technocratic emergency approach should form part of a broader institutional and community-based response to undernutrition. Their rhetoric states that emergency malnutrition programs should not be needed, but are needed with unfortunate frequency; a response to a configuration of circumstances, when other responses have failed (Bradol 2009:213-217, 220-222; de Waal 1997:1-2).

The clarity offered by a medico-technical approach to emergency nutrition stands in contrast to broader issues of global nutrition, food supply and agricultural economics, embedded as they are in social practice, ecologies and politics. In the context of emergency, thresholds for intervention can be comparatively clear. As one senior member of MSF stated frankly to me: “We choose to wait. Until people are about to die. And then we intervene. So the threshold is fairly clear. And we can measure our impact well. And we have technically improved a lot in terms of how we make almost-dead children live again. [...] But is the framework the right one? I guess that’s...that you can challenge. [...]do we do it well? Yes. On our terms. The way we define hunger.” (Interview with WR, 2013-12-27).³³

The practice of numbers and medicine in the context of emergency are techniques used to define a neutral space, the hospital space, a bulwark against the world outside, with its war and hunger. Inside the Machine there is comparative calm, and comparative order and rationality and the assurance of a well-run technocracy. Once a patient or practitioner steps beyond the boundaries of the Machine things become less certain. These are boundaries not only of physical space but of numerical dimensions as well. On approaching them, as Nyajuma did, the dynamics in the details become more evident. The next chapter will take up these questions of

³³ For an excellent account of how pragmatism shapes numbers in the context of an MSF nutritional intervention see Crombé 2007.

institutional boundaries in more detail, as it considers whether and how technocracies can manifest care in practice.

Summary

For the people of Leer, 2014 was one of the hardest years in living memory. Yet, despite trauma and trepidation (sentiments that affected, to different degrees, both members of the local community and the MSF aid workers), it was a time of intense activity. The recent loss of life seemed blunted by fear of encroaching mass starvation and the need to avert it. It was this spectre of widespread starvation that impelled MSF back to Leer, despite the destruction of their hospital.

MSF's concern with malnutrition flows naturally from their mandate to focus medically on those human lives they consider most vulnerable—those nearest to death or most severely affected by crisis. Almost routinely, this translates to a focus on children under five: the people first and most severely impacted by (among other things) food scarcity and starvation. MSF divides therapeutic care for childhood malnutrition into two hospital services: inpatient and outpatient. This chapter focuses on outpatient care, ATFC. The nurse in charge, Heiko, affectionately refers to ATFC as “The Machine,” a metaphor for how he wishes the clinic to run. Indeed, ATFC's key measures, the MUAC and the Weight-for-Height, allow care to be routinized—almost industrialized—to process hundreds of patients in the course of a morning. These medical technologies are outwardly simple, but marshal generations of research and experience to permit rapid diagnosis through numbers. The case of Nyajuma reveals some of the uncertainties in clinical measurement; global norms are not always applicable to the local or the individual. Similarly, Heiko narrates a series of events that indicate how the rational, well-

intentioned systems of ATFC can be disrupted. These events show the limits of the ATFC model of care.

The ATFC evolved as a complex medico-technical solution to the problem of how to feed severely malnourished children in extremely remote or resource-poor settings. The technologies—both of measurement (MUAC and Weight-for-Height) and therapy (Ready-to-Use Therapeutic Foods such as Plumpy’Nut) are well adapted to the minimal infrastructure of a medical humanitarian setting. In fact, some technologies (notably RUTFs) are purpose-built for the medical humanitarian setting. The specialist concerns of the ATFC makes it opaque to those who are not part of the Machine—it may bewilder those who first encounter it. The MSF hospital, with its sophisticated tools and techniques, has literally dropped from the sky. The expertise and equipment, even the cement, nails and timber that compose the structures have been flown in from far away. It is very much an alien structure, inhabited by alien peoples and alien knowledge. It is a cornucopia that dispenses medicines and foods to certain sectors of the population (those defined as the most vulnerable), at certain times (defined as periods of acute medical crisis—which in Leer is all the time). Yet despite the alien character of The Machine, people soon become accustomed to it. They learn to obey the rules and get what they can from it; to “make the best of it”, as one mother said.

The ATFC can be understood as a medico-technical response to a moral problem. It is an outgrowth of a political and economic configuration that insists starvation is unacceptable yet allows certain groups of people to starve anyway. In this way the ATFC is representative of a core dilemma of medical humanitarianism at large. The ATFC attends to children who are in nutritional peril in the here and now. It does not attend to conditions that gave rise to their danger. It does not attend to their families or politics and economics of starvation. Nor does it attend to children in advance of danger—it waits until they are almost dying. The ATFC is also

representative of the way technocratic institutions understand and approach emergency: there is clarity in crisis. Within The Machine, those areas under its direct control, there is careful measurement and management. The patient pathway is clear and the protocols are strictly followed. Beyond the facility's threshold, knowledge and ability to influence the situation grows hazy. In the same way that numbers can give indirect knowledge of the world beyond the hospital, RUTFs permit a tentative reach into the household. But beyond these tenuous extensions of care, patients must fend for themselves.

Chapter Five: The Ward

This chapter examines MSF's nutritional care at the bedside: the Inpatient Therapeutic Feeding Centre (ITFC). Previous chapters demonstrated how emergency is conceptualized in meeting rooms, spreadsheets and outpatient clinics (the level of the population and body politic). This chapter focuses on emergency within the individual body. It endeavours to show how medical attention is accorded to infants that are badly starved and ill (in clinical language: paediatric patients with severe acute malnutrition and infectious co-morbidity).

These children are among the most powerless and fragile humans on the planet. Their situation—utterly helpless and utterly naïve of the forces that brought them to the edge of death—gives them, in the eyes of humanitarians and their sympathizers, an unimpeachable moral status. We are captured by the wide eyes in front of us, as they meet our eyes. While the children remain mute, their bodies argue for them: something should be done. As noted in the opening chapter, this is a large part of the appeal of emergency nutrition and food aid. In the popular mind, when the nurse feeds a starving child it is easy to imagine she nourishes the body politic as well (Lock and Scheper-Hughes 1987:23-25; Douglas 2002:142, 150). Yet food aid feeds the same body politic that brought these children to the brink in the first place—it can cover-up and excuse the ineptitude and violence that led people to starve (de Waal 1997:215-221; Scott-Smith 2013:926).

Unlike the public health techniques examined in the previous chapter—where quick, numerical measures are used to rapidly assess and implement preventative regimens on a mass scale—this chapter focuses on the clinical encounter—the interaction between a clinician (or more commonly, a small group of clinicians—normally MSF-trained “paramedics” and nurse assistants led by an international or senior national or international colleague), the individual

infant and the mother. Through a series of conversations with clinicians and observations of treatment, the ethnography hopes to communicate some of the mindset, technical skill, institutional structure and personal intention that animate care in the MSF setting.

When personal attention characterizes a clinical encounter, it can obscure the mass industrial complex of institutional knowledge, structure and resources behind it. The chapter aims to illustrate how the combination of these multiple factors—knowledge, observation, practice, intention, material, structure—combine at the bedside to determine the character of the treatment. Where the previous chapter revealed the role of numbers in the Machine, this chapter explores how personal intention animates the workings of the Machine, how knowledge of the Nuer body and social life is incorporated into the Machine, and ultimately how individuals intend their practice of care to counter the anonymizing effects of institutionalism.

Leer, August 2014

Time passes; the corn and millet grows. The aid intervention continues: the giant cargo planes of the ICRC circle town to airdrop thousands of sacks of grain and sugar. The community is a hub for regional aid in Nuerland. The proximity of famine recedes. But the seasonal flood of the Nile is worse this year; floodwaters impinge on the croplands. It will be a meagre harvest, but still a harvest. The dry season (“the fighting season”) draws closer. The future remains a source of dread, but for the present moment the people of Leer are further from danger. There is food in the community for the foreseeable weeks. Calves and goat kids scamper. The crops, if the flood does not affect them too much, promise a little food stock and seed.

There is a semblance of normality as people attend to duties beyond bare survival. People go visiting. The tailors, bike mechanics and other craftsmen open their shops. Moving through the market I see a few entrepreneurs back at brewing alcohol, and the hardcore drinkers return to old habits. The tea shops are open; where there is a generator and fuel there's music from a CD or cassette player. It's mostly the rebel soldiers who inhabit the tea shops, languorous in the afternoon swelter. Elsewhere in the market there are things to be had at the stalls: soap, sandals, blue jeans, plastic kitchen utensils, even warm cans of Tusker beer—though each can costs 25 South Sudanese Pounds (at this moment, roughly the equivalent of eight Euros: far beyond the reach of most everyone). I chat with the traders. The goods come from a warehouse in the south of Unity state. The warehouse stockpile escaped the destruction. The traders, local boys from Leer, made the journey by boat and through the swamp to bring these items here. I tell the traders that I'm happy to see so many goods in the market—but their response is grim. People are not buying, they say, there is no money in the community.

With the first of the harvests, families hold mortuary rites for those who died during the conflict. The mortuary ceremony should be held around four to six months after death, but the flight to the swamp delayed all these ceremonies. Finally, in August, there are resources enough for families to mount the rites. I attend one such ceremony for one of the MSF staff—Ezra, a long-time medic in Leer—he and his son both died of infection after many weeks in the bush. The two are commemorated together; the ceremony is syncretic blend of a Christian church service and Nuer mortuary rites (Evans-Pritchard 1949:57-62). At the end of the ceremony, I join the priest, male members of the family and some Nuer MSF colleagues at the family compound for the meal. All the men sit together in a group. I consider the five MSF men sitting around me. Three of them have visible disabilities: one missing an eye, one missing a leg, the third bent and crippled by childhood Polio. Their bodies, like the bodies of the children at the feeding centre, give a political history of Leer.

I don't dwell on my reflection; I am too trepidatious. I've come to this ceremony with a full belly—well-fed on tinned goods from the expat kitchen. I am obliged to eat, yet I know this small feast represents a substantial portion of the family's wealth. My trepidation is somewhat eased by the man next to me, who assures me the women, youths and children of the family will eat separately but at the same time—they will not go hungry to feed me. My informant's words are borne out, and I'm surprised at the size, variety, flavour and delicacy of dishes prepared from kitchen gardens and aid staples: kisra (a red injera, made from sorghum), chunks of grilled beef, meat soups and small bowls of beans, okra and greens. We eat with genuine enjoyment. Perhaps I should not have been surprised at the richness of the meal. Because Ezra was a senior medic with a foreign NGO, his family was able to rely on a regular income, and thus accumulate wealth in cattle and other assets. The organization paid out death benefits in line with their human resources policy. Ezra's family could also tap into the local MSF staff network; the local staff and expats supported this event with a collection. Whether the family will be able to maintain their wealth and network now that Ezra is gone is another question.

Walking home from the event I note other signs of normalcy and surplus. Building continues, as people fence and repair their homesteads. Most people, anticipating near-future flight, live in slouching, quick-made tukuls of a few square meters, roofed by thin layers of loose thatch, plastic sheeting and empty grain sacks, weighed with rocks or tied with rope. Function is the only concern; the ramshackle buildings are enough to keep the torrential rain off, but little else. However, near to Ezra's compound, one man—a church worker—rebuilds in elaborate style. He has reclaimed his large tukul and topped it with an elegant, multi-tiered thatch roof and a cross-shaped finial. The structure stands two stories tall. House and compound, resplendent with crops, stand prim and sparkling. It was like that before the conflict, my MSF colleagues tell me, and it was all burned to the ground. But, I ask, what if the conflict returns? Surely the roof

makes his compound a target for the looters? He doesn't care, they tell me. The luxuriant thatched roof says many things.

ITFC

By August 2014 the MSF hospital, and my research too, has settled into a rhythm. Having spent much of my time to date focused on the ATFC, I shift my focus to its sister service, the Inpatient Therapeutic Feeding Centre—or ITFC. I plan to spend at least two weeks at the nursing station, watching the daily routine: patient intake and check-ups, the daily feeds, the progress of children through time.

Where ATFC is an outpatient clinic, ITFC is a hospital ward. Leer's ATFC will see hundreds of children in a day, but now, with the airdrops and crops, the food situation had stabilized somewhat, ITFC accommodates only around 15 patients at any given time, though it has space for many, many more. "Now that the maize is coming outside, most of the community you won't see," one of the local medics told me, "because the community is busy." Harvest means the family must work in the fields, from early to late. There is no time to spare. "If the child is sick, they will not bring."

The ITFC itself is an A-frame building, approximately 6m x 16m, built mostly of local materials. Some imported timber has been used in key places, and the floor is finished with concrete for easy cleaning. These materials have been flown in by MSF, and so are kept to a minimum. The building sits a little apart from the rest of the hospital. It doesn't look like much. With its messy thatch roof and veranda posts made from crooked local trees it escaped burning, though it was thoroughly looted. Inside is a large, open space. There are no internal structures except for a dividing screen at the far end. Made of chicken wire and salvaged zinc sheets, the screen separates the nursing station from the patient sleeping area. The building is open on all

sides; the brick walls only go to waist height, the rest—to the roof—is chicken wire. There was once mosquito netting over the wire mesh, but no more. The room is shaded, open and breezy. This reduces the inevitable, unmistakable smell of patient wards in remote, tropical settings (a combination of rancid sweat, urine and unwashed clothes). There are few indications of the violence that passed here. One of the zinc sheets that divide the nursing station from the patient area is blistered and coloured with sunbursts of fire oxidization. The rest of the place is clean. What furniture there is—and there is little—is brand new.

In the patient area there is bare space, where the mothers can lay their mattresses, blankets and reed mats. Each mother is assigned a vinyl-covered mattress, with a wool blanket and mosquito net. The open rafters and the window mesh are festooned with scraps of strings, wires and shredded fabric ribbons—all to hang the nets at night. Clothing and other personal items hang from the rafters too. In the morning the nets are rolled up and put away, and personal items shoved to the walls and corners. The place will get more cluttered at night, as everyone comes inside, the nets crowd one another and the blankets are brought out to ward against cold. For now, in the daytime, only a few mothers linger inside. Many sit chatting on the veranda or work just a few meters away—cooking, bathing children and laundering clothes. The infant patients sit on the reed mats with their mothers while other children, young siblings, run around with playful shouts.

The nursing station is large enough to comfortably accommodate two footlockers of riveted sheet metal that hold the food and supplies; there is also the drug cupboard, a blue vaccine fridge (the fridge doesn't belong to ITFC but has nowhere else to be stored), a couple of white plastic tables and chairs and a book shelf with protocols, binders and boxes of fat Luer-lock syringes. Unlike many MSF nursing stations, there is ample room to move. You can even sit and stretch

your legs. While spartan, in the essentials it resembles the nursing stations I know from Canada and the UK.

On this morning I enter to find ITFC supervisor Joseph and a young paramedic, Du'al, as they review the patient register. I join the two men as they cross-check figures for the monthly report.

While his peaceful demeanour and jumbled English give no hint, Joseph is one of the most experienced medics in the mission. A gentle, methodical Congolese nurse, he spent around a decade on MSF's programs in that country before he became an expatriate. As an MSF nurse he has worked almost exclusively with nutrition programs.

Joseph is expecting me. I proffer my research information note and pin another copy to the wall. The two medics peruse the note with casual interest, then put it aside. I sit quietly for 15 minutes as the men finish up the paperwork. When they finish we talk a bit about the study as they tidy up their documents. The study, I say, asks what makes an emergency. We ponder whether Leer's situation at present would qualify. The pair are polite and friendly, though, I detect, slightly disinterested; they see many visitors from headquarters, each with this or that question that needs to be answered in the space of a week-long field trip. Du'al excuses himself to attend to a mother's request. A junior employee, perhaps he feels the conversation is not his place; perhaps he feels uncomfortable with the topic; perhaps he just wants to attend promptly to the caretaker's request. Joseph and I continue to talk.

Joseph tells me that when the team first returned to Leer in May it was clearly an emergency. The huge numbers of children in ATFC spoke to that. But with the food drops the situation has stabilized. There is more food in the community, he says. Although ATFC numbers remain high

they have stabilized from the previous overload and the children are not as critical as they were initially. At present, he says, in ITFC there is no emergency. The place is quiet. This is a sign that there is adequate food in the community, for the moment.

Now the people here have wealth, Joseph says, because weddings still go on. Of course, all the wealth is in cows, not cash. At this time many people keep their cows in the bush and hide the exact location and number of cows—they don't let that information slip—so it is difficult to read the severity of the crisis from the number of cattle. But all of the MSF staff, he reckons, have five or ten cows. There is wealth in the community, Joseph says, but again, it is hard to judge just how much.

Pre-crisis, I would later learn, a significant extended family cattle holding in Leer would be 40-60 cattle. Ten cattle might be an average nuclear family holding, while two to five was paltry; even before the crisis the very poorest of families had no cattle; they would raise goats. By August 2014, ten cattle would be considered a substantial holding. Many families struggled with one or none. The truly destitute—normally elderly, infirm or widowed mothers with many young children—could do little field work, held no livestock and relied instead on aid distributions and neighbours' charity. The previous six months decimated the cattle stock. Disease took its toll, as did war (as strategic assets, cattle were directly targeted by armed forces). However, the greatest loss came as cattle assets were sold for food. In the absence of currency, families sold beef in exchange for other foods and necessities. The glut of meat lowered its price, further impacting purchasing power.

People's clothes are shredded, Joseph continues, but they can't buy new ones, because there is nothing in the market. They would buy new if they could, it's not a question of money, but

market supply.³⁴ It's also a question of preference. People here live in small, humble tukuls, when their wealth in cows is enough to build a big house. That's what I would do: build a big house, Joseph says, with so many cows, at home in Congo. But here people prefer not. They have a similar attitude to food. People will sell imported foodstuffs (sardines or goods from distributions) in order to buy the local foods they know. These aid commodities are distributed with an eye to caloric requirements of a child or family, but social practices make it impossible to estimate how much an individual family member will eat. Generally, the men take the bulk of the food, and the mothers take very, very little. All the effort that goes into bringing food here, Joseph says, and you can never be certain whether it will be effective or not.

If there is a real pressing emergency here, right now, he says, it is in education. All the schools have been destroyed and none of the children can attend class. If this is allowed to persist, it will only make worse the conditions for the future. The educated elites—some of whom are the very people who are behind this conflict—send their children to international schools in Juba, while people here have no school at all. And so there can only be an ever wider division between the people and those who rule them.

As we talk, Joseph continues to work. He counts the figures from last month. 27 admissions, 71% from ATFC, 21% from OPD. One death. Currently nine kids admitted. These are good figures. I note to myself that the severity of the patients and the pace of work is in very stark contrast to what we had in Bentiu. Even those admitted in ITFC are healthy by comparison to the Bentiu children.

³⁴ Joseph's statement does not entirely contradict the market traders selling clothes: the market shortage is one of hard currency. What currency enters the enclave comes as aid worker salaries, quickly diluted among extended family; as one local MSF worker told me, "The day we receive, all the relative will be waiting for you at home." To compound cash scarcity, buying power is substantially reduced—the South Sudanese Pound tumbled precipitously from December 2013.

“Oh, we have an admission!” says Joseph. A mother and baby arrive in the escort of one of the ATFC staff. The mother has been referred by ATFC because her baby has lost weight.

We clear the workspace and the group of us sit around the table—the mother, Joseph and me. Du’al joins as translator. The baby sits in the middle of the square table, one of those ubiquitous, shaky, unsatisfactory, plastic garden pieces. A table always slightly wavering.

Together with the translator, Joseph starts the physical examination and takes the clinical history. The mother is in her early-20s. The baby is seven months old. The woman strikes me bright and with a pleasant demeanour; the baby is good-natured too. The infant doesn’t complain at the prodding inspection. She wears a frilly dress—perhaps her mother selected it specially for the visit to town. The baby is sleepy, perhaps a bit lethargic. Du’al notes vitals signs and does a quick physical check. He presses his thumbs into the tops of her feet, to see if the imprint stays—this is the rapid test for oedema (called “pitting,” in an oedematous child the thumbprints will remain, two indentations in the skin). There might be some oedema in her legs, Du’al reports, but not much. She has candidiasis in the mouth and anus. Joseph peers at the admission card and I lean in beside him. Here. Here is why she is admitted to us. He points to the clinician’s notes on the card. She has diarrhoea and has lost weight since her last visit. From 6.4kg down to 6.1kg. It is only her third week on the program. She was originally admitted, not on MUAC (which was an orange 121mm: still above the ATFC admission criteria of 115mm) but based on a Z-score of -3 (see Chapter Four for an explanation of MUAC and Z-Score).

Joseph and Du’al take more clinical history. Nothing unusual: the child had diarrhoea for the last few days. Joseph writes a prescription for Nystatin for the candidiasis and says, let’s wait and see. If she still has diarrhoea tomorrow or the next day we can talk to the doctor to consider antibiotics.

The interview turns to practicalities. Is it a problem to stay overnight for some nights? —No, no problem. How far away do you come from? The mother gave a village name we did not recognize. Where is that? —Rupkuai Payam. Where? —2 hours walking, came the reply through Du'al, the translator. They arrived here last night to attend ATFC, but they can stay a few days more.

Does she have other children at home? —Yes, she does. This is often the major problem, Joseph tells me. It was even more of a problem at the beginning of ITFC in May. Mothers can't afford to stay a long time in the hospital because they have other children at home that depend on them. It's hard to explain to their husbands why they have to stay away. I nod as I remember an incident Heiko related to me: an enraged husband who showed up at the gate of ATFC, accusing his wife of having an affair with someone at the centre, and that's why she was there so often. The MSF staff had to intervene to calm him. It was even worse for the mothers at the start, Joseph says. Now in ITFC the mothers get blankets, soap and a mosquito net, and they are fed daily. In the beginning, there was no food for the mothers, so MSF had to give them BP5 (nutritional supplement biscuits)—which you could make a porridge from, but the mothers disliked it. Bad food and harsh conditions contribute to defaulters and absconding, he says. With so many responsibilities, if the mother eats poorly, stays in an over-crowded ward, is cold and bitten by mosquitos at night and worries for her children at home—she has little incentive to stay.

Like this woman here, Joseph says, she came expecting to stay a short time and now she will have to stay two to four nights, until her baby is cured of diarrhoea. They come without a change of clothes and without making arrangements for their children at home, because they don't know they will be referred here to ITFC.

Speaking with the mother, Du'al finishes the patient notes. The little girl is fully awake now and starts to move about on the shaky surface. As he talks, Joseph braces the baby as she stands on the table. The tot fixes on me and smiles—she likely has never seen blue eyes before. She leans towards me and grabs at my beard. I support the child as her mother grins. I smile and make baby faces, then the mother's eyes widen, "Uh-oh!" The child pees all over the registration book and table, missing my lap by inches. The urine spatters and I twist about unseemly in the chair to hand the child off to mother; Joseph is not the least perturbed. He simply tips the registration book to allow the urine to run to the ground. Feeling silly, but conscious of hygiene and my status as a visitor, I put on a rubber glove before I swab the rest of the table.

There are smiles and some laughter between the group as Du'al lifts soap, blanket and mosquito net out of the cupboard. He then takes mother and child next door for introductions to the rest of the mothers. "*Malé*"—"malé"—"*malé madit*"—"malé m'gwa," the complex cycle of greetings goes all around.

The next morning I arrive at ITFC in advance of the 9:00 am feeding. Joseph is in on the ward, reviewing figures on a clipboard. I enter the ward with a greeting to the mothers—"Malé!"—"Mal M'gwa!"—then chat with Joseph as he transfers the details of each patient's specific feed onto a whiteboard. The large whiteboard is the only piece of furniture in the room, if you don't count mattresses. It's a hand-drawn chart, made with permanent and dry-erase marker. It lists each patient's name and the mother's name, the dosage of each feed and the time of each feed. The numbers change daily, as patients come and go and children gain weight. As they transition through the different phases of nutritional therapy patients are put on a different regime. Joseph finishes filling in the chart, then calculates the totals.

When he finishes his final cross-check, Joseph walks briskly to the storage turns in the nursing station. He frees the padlock, throws the lid back and counts the food needed. F75, F100 and Plumpy'Nut. Each comes in a vacuum-sealed foil packet, differentiated by colour and size. The feeding assistant doesn't read and or speak English, he explains, so he has to make things very clear. He counts the packets under his breath as he plops each set into its own colourful plastic bucket. Un, deux, trois, quatre, cinq ... plop, plop, plop, plop, plop go the Plumpy'Nuts.

He collects the buckets, then calls Judith, the feeding assistant, to the white board. Judith is an older woman from the community. She has an impish smile and speaks just enough English for the job. Joseph points to the board and numbers with his fingers as he counts through the quantities and packages with her: this many F75, for these patients; this many F100 for these patients; this much Plumpy'Nut for this many patients. "For emergency?" she asks. "You have two for emergency," Joseph says, holding up two fingers. He counts out the total number of Plumpy'Nut sachets in the bucket—one, two, three, four, five, six, seven, eight—and two for emergency—nine, ten. Same for the milk. Thumbs up from the feeding assistant. Judith takes the packets outside to the prep room to mix them.

We briefly stop at the nursing station to complete the paperwork—to confirm the number of sachets taken out from the inventory—then join Judith for the milk mixing. The mixing room is small, concrete and very well scrubbed. Mosquito nets drape the door and windows to keep flies out. Pots of water bubble on the gas burners. Judith is already mixing. She takes the duty very seriously. Her moves are careful and smooth. She wipes the sachets before she snips each one to add the powered milk to the mix. She has two containers on the boil—F100 and F75. She covers each container when not in use, rests the spoon carefully to ensure the ladle touches nothing. When a cup falls she uses boiled water from the kettle to wash it before she continues

with the rest of the preparation. Joseph gives advice on quantities: half full, not a quarter full of water. Yes, make sure there's enough water.

When the milk is mixed the two carry the covered buckets to the ward and place them in front of the whiteboard. They call out the names of the children one by one. The mothers come forward, each with a plastic cup, each one wiping or washing the cup to ensure some cleanliness. But the flies already gather. The mothers shoo the flies constantly, but left unattended a cup of milk will quickly be defiled. The nutrient-rich medium is a prime breeding ground for bacteria (Briend 2009:195).

Joseph reads off the chart: 120ml of F100 for this child. He watches as the feeding assistant uses one of the large, 50ml Luer syringes to draw up the milk, one, two, two and a half syringes for this child. Good. On to the next child; a different dosage. They move through the list quickly. All the participants are practiced in the routine. There are only nine patients today, but despite this it is noisy and a bit chaotic; siblings chase and make a ruckus, mothers shout and babies cry. I imagine feeding time at a centre with 50 children. 50 children is closer to the norm in MSF.

At the end of it, the mothers are back on their blankets with their cups of milk and most of the children are quietly drinking. Judith stoops to gather the used buckets. Joseph dusts off his hands with a cheerful clap, "Finished!" he calls merrily to Judith in his Congolese-French accent, "Go, clean! Then come to see the mother, how they are doing!"

After the feeding time, Joseph and I sit at the nursing station and talk some more. I tell him that I couldn't imagine how chaotic it must be to manage an ITFC at capacity. He tells me this is the smallest and quietest ITFC he has run. He's run places with up to 300 patients, he says, that is chaotic.

It's quiet now, he says. There were more children at the beginning, and also more complications. Joseph explains that he was here from the start, amidst weeks of influx and overload, then left for his mandatory two-week holiday—and returned to quiet. “I found that the situation became very stable. ... I think that the reason can be that, the children, they come on time.” This is contrary to the beginning. Now the discharges are many and the admissions are few, he says, but in the beginning there were so many admissions, and we could not get the kids healthy enough to discharge. The air drop food distribution started within a couple of weeks of MSF's return and this helped to stabilize the situation. The population is generally healthier. The complicated cases reach OPD on time, before deterioration. The ATFC numbers remain high—because the kids are undernourished—but they don't have severe medical complications. They have some malnutrition, but the complications are not enough to tip them into severe acute malnutrition, the thing that would send them here, to ITFC.

Some of the cases that we have here, Joseph says, are sent to us from ATFC as non-responders. These ones don't gain weight in the ambulatory program. We are often able to help these cases, he states, because we find that they have no medical complications. With monitored feeding in the ITFC they quickly gain weight. “That is a clear indication” that, despite being in the ATFC program, they do not get enough to eat at home.

Joseph says, I asked some of the mothers about this. One told me: “How? How you, when you live in bad condition and you have two to three children and you say it's not possible [to share the therapeutic food]; when we brought it at home we have to share it.” It's impossible not to share Plumpy'Nut among young members of a family—to say only this one eats and the others don't eat. Another mother said, we have many things to do: agriculture, and attending a

food distribution, so we leave the children with relatives to care for them, and then the relatives also eat. They take their share of the Plumpy’Nut.

So, he continues, to address this we give education. With the mothers here we say, “see the child improve—do the same at home” even if you have to share, make routine feeding times and take care to feed the child carefully, make sure that the child gets a lot. Mothers, before they come here, see the Plumpy’Nut as “a distribution food, not as a therapeutic food” (i.e. they see it as food, not medicine).

In Congo, Joseph remarks, there was a lot of Plumpy’Nut showing up in the public marketplace. We had a suspicion that this might be our Plumpy’Nut, so we did a test. We cut the four corners of the sachet before we distributed it. So when it was in the market we would know what was ours and what was from Ministry of Health. We found some of our Plumpy’Nut there, with the cut corners, but most of it was not. I saw it with my own eyes in Congo, Joseph says, I saw the shopkeeper buying it directly from the World Food Program representative. The WFP man came on a motorbike with a box of it, and a mother said to him “I don’t have money to buy it today” so he said “OK, come back tomorrow.” He sells it to the mothers, where his job is to distribute it for free. It’s also very common, Joseph adds, that the relatives debate amongst themselves, which child will we send to the program so they bring Plumpy’Nut for the whole family. Plumpy’Nut is a food commodity, like any other. How can it not be?

Food for the mothers is also an issue. If they don’t eat enough here, obviously they will want to default. So ensuring an adequate meal for the mothers is also key to the treatment of the child. All caretakers get two meals per day, around noon and 6:00 pm. The meal consists of sorghum, lentils and oil, cooked in a soup. This is enough, says Joseph, because they also bring

or buy food from outside. “Now when you see the mothers they are in good health.” Before they were skinny and emaciated like their children. Now, “at home they get vegetables and maize.”

I ask Joseph to explain the difference between the therapeutic milks, F100 and F75. “F” stands for “Formula,” he says. Therefore F100 is “Formula of 100: ... when you put 100 millilitres of water you have 100 kilocalories.” F75 is formula of 75: “when you dilute with 100 millilitres of water you have 75 kilocalories.”

To understand who gets what you need to understand the phases of inpatient nutritional therapy. Joseph explains the system to me. In ITFC patients are put in either Phase One, Transition or Phase Two. F75 is used for children in Phase One. Phase One is the entry level—the stabilization phase. Phase One children are in the most fragile state. They cannot take much nourishment at once; they need a slow increase of kilocalories over time. If you give too much, too fast, Joseph says, you can “disequilibrate” their metabolism.³⁵ This can be fatal. They can’t digest much at once, so over time you slowly increase the kilocalories. Most children at this stage are not only malnourished but badly immunocompromised; they come with infections that must be dealt with at the same time. And, because they are ill, they have little appetite. They might not want to eat, and when they eat they might have trouble keeping it all down. It’s a delicate process, but as the child gets stronger, they can take more and richer milk. It often doesn’t take long. They might enter the transition phase, where you introduce F100 and then the Plumpy’Nut, or they might move straight to Phase Two.³⁶

The progress of the child is measured by three things: weight, medical condition and appetite. If the child gains weight—measured in grams—that’s a sign that the body is in

³⁵ In clinical language, “re-feeding syndrome”.

³⁶ As of the 2014 protocol, a child in Phase One receives 135ml of F75 per kg of body weight per day over the course of eight feeds (every three hours, even at night). Transition Phase is the same feeding protocol, but using F100. One sachet of Plumpy’Nut may replace one of the milk feeds when the child is ready. In Phase Two the child receives a minimum of 200 kcal per kg bodyweight per day, divided into six feeds—four of milk and two of Plumpy’Nut. Unlike the previous phases, Phase Two calories are not restricted—if the child shows appetite, they are encouraged to take more (MSF-OCA 2014).

recovery, likewise if infections start to resolve and the child demonstrates appetite. These things happen in concert. The average stay is seven days in Phase One. That's about all the time that's needed to stabilize a severely malnourished child. Phase Two is the rehabilitation phase—the children here eat more nutrient-dense meals. The feeding in Phase Two promotes rapid weight gain and catch-up growth. Phase Two prepares the child for discharge into ATFC, at which point they will have gained enough to be considered eligible for care in the home.

Transition phase is not something that every patient goes through. The transition phase is an optional phase for children—usually those with oedema—whom, after seven days, are not ready to move into the feeding regime of Phase Two. Children with oedema are generally more difficult to manage. Oedema takes longer to resolve, Joseph tells me, because kids with oedema can't take F75. "Why? This is good question. ... F75 has low sodium and high potassium ... retention of potassium in the body is one cause of oedema." Plumpy'Nut—which is the only food distributed at ATFC—can also increase oedema. That's why they refer them here—oedema can only effectively be treated in the hospital. Joseph explains that oedema is bad for the functionality of the "sodium pump." Sodium, he says, is like a pump that regulates the flow of water in and out of the cells. With oedema, the body doesn't make effective use of its water; water stagnates outside of the cells, causing the body, particularly the extremities, to take on a bloated appearance. Oedema on one side of the body can be present due to a number of medical conditions—but not malnutrition. Persistent bilateral oedema, Joseph says, "this is sign of malnutrition problem." Oedema actually makes for a lot of weight gain, due to water retention. Joseph shows me a patient card, and points to the weight graph. The graph's curve shows a steady drop in weight since the child entered ITFC—the opposite of the expected direction. The child with oedema can lose weight in ITFC, Joseph explains. Water retention plays tricks; retained water is excreted as oedema decreases, and so weight decreases too. Therefore it's

very important to track weight and oedema simultaneously. In this case, weight is not a reliable proxy measure for health—the numbers are no substitute for the clinical eye.

I ask Joseph, “What is Plumpy’Nut?” “Therapeutic food,” he answers. Plumpy’Nut is medicine in the form of food. He numbers its specifications: one sachet is 500 kcal and 92g weight—very light and very energy dense. It’s intended for ambulatory feeding and it’s used in Phase Two, to get the children eating it before we discharge them to ATFC.

“Normally, ATFC is part of the paediatric system,” administered through OPD, as part of a basic healthcare program. The introduction of Plumpy’Nut changed a lot—it made it possible to have separate, specialized nutrition programs. It was a paradigm change. Plumpy’Nut is easy to store, to keep, to educate about, to apportion, to eat—it’s soft, so it helps the eating and digestion—and it’s also hygienic. There’s less risk of contamination when eaten straight from the packet. It is packed with energy. “Here we have a lot of sugar and oil, to give the children power.”

“Before Plumpy’Nut ... we used the porridge. Maize and [soy] mixed together. ... We gave also oil and sugar mixed together. ... The children came morning to ambulatory system and [we] cooked breakfast and gave demonstration. Then moms went with the ingredients. This went as food for the whole family. We’d cook two times per day.”

“So it was daycare?”, I ask, a soup kitchen and a distribution point in one place. “It was daycare.” But in the hospital sense, not in the sense of childcare. The mothers had to stay the whole day, they couldn’t go away to work. It was a big loss of time for them because “the mothers are looking the money, the clothes, the food.” The fathers aren’t giving much, except on special occasions. A day spent in the feeding centre was a day’s work lost (see Scott-Smith 2015

for a history of the development of this form of feeding, and Scott-Smith 2013:916-918 for a critique of Plumpy’Nut).

Complications and Mortality

Children who die of malnutrition rarely starve to death; rather, infection takes them first. One of the two—infection or undernutrition—will come first, but the other is never far away. The two work in synergy. Undernutrition lowers immunity; infection can increase energy requirements and metabolic rates, induce diarrhoea or vomiting and reduce appetite (see Chapter Four: Emergency Nutrition for a lengthier explanation). Health spirals rapidly downward. Clinicians must simultaneously manage two life-threatening conditions and the redoubled nutritional demands of the body fighting infection. So powerful is the impact of infection that, even in the most severe nutritional crises, actual deaths from starvation are effectively zero (Tomkins 1986:289, 292-293; Waterlow et al. 1992:290-292; de Waal 2005:187-193; Briend et al. 2015:S16).

This knowledge led to a variety of specialist practices within the ITFC, including a strict emphasis on hygiene and—for the most severe cases—partial or full quarantine. Children in ITFC are severely immunocompromised; if a diarrheal infection gets on the ward it can spread rapidly. In these circumstances, it can kill within hours.

Occasionally a child in Phase One will be so weak that they cannot take milk, even by the spoonful. They might not be able to swallow or keep the milk down. In that case the child can only be fed via nasogastric (NG) tube. It is what it sounds like: a tube that runs from the nose, through the sinus into the stomach. A syringe is used to draw up therapeutic milk, and the milk is passed through the nose via the tube. The tube can remain in place for many days, until the child is healthy enough to eat. But its presence is not appreciated.

“When we have no other option for feeding,” says Joseph, “with the MD we decide on the NG tube, and this the mothers have a big problem with.” They believe it runs directly to the heart, and if done incorrectly it can stop the heart.³⁷ They believe that injections do the same—medicine runs straight to the heart. But injections are quick, then finished. The NG tube just sits there. They will only accept it with a lot of counselling or when the child is obviously extremely close to death. Even then, when the child dies the mother can say “I didn’t accept to put this in.’ It’s the same for blood transfusion.”

I nod, remembering a similar struggle I observed in Bentiu. It was a vicious circle. The children closest to death needed NG tubes, blood transfusions or oxygen. But these were the very children that died most often. The link would form: it was the NG tube that killed the child. There was little privacy in the open space of ITFC; mothers witnessed the deterioration of others’ children. It was only human to recount and speculate upon the death of a child and the care in the preceding days and hours. ITFC could be a rumour mill. Thus new mothers arriving in the facility might be warned: the children that have these interventions, die.

Intravenous (IV) therapy is more common and its use may be more accepted, but it is still difficult to manage. IV lines transfer fluid directly into the bloodstream, thus the most common use of the IV is to combat severe dehydration through solutions of saline or dextrose in water. A needle is inserted in the vein and, through a cannula, connected to the line and fluid bag.

An enormous degree of skill is needed to find a vein on a paediatric patient and successfully insert the needle. It is particularly difficult to get a line on infants, because their veins are tiny and readily collapse when dehydrated. If an arm vein can’t be found, then a vein on the ankle, inner

³⁷ Medically speaking, if the NG tube is placed incorrectly, milk can be directed into the lungs instead of the stomach, which can kill the child.

thigh or the scalp may be feasible. A missed insertion can damage the site, so that vein is no longer viable for cannulation; thus it can take a dozen or more tries to successfully insert the needle—often while the patient’s condition deteriorates and the family watches. It is a matter of pride to quickly and effectively get a line on. Often the most skilled will be senior local staff, who have done thousands of insertions under the same rudimentary conditions.

“The place we have to do a lot of IV we have a lot of death,” says Joseph. This is because of the high acuity of the patients (there is always infection risk with IV cannulas), and the fact that they need very close monitoring. This requires a high level of staff skill—something often not available in such situations. The IV must be carefully controlled. Too much fluid too fast, you will give the child oedema and organ failure—they will die as a result. Too slow and their situation will not improve—they will die of dehydration. “The child will stay without conclusion of the dehydration.” Joseph recounts that in the earliest days of therapeutic care for malnutrition there was limited precedent—little body of knowledge and almost no clinical experience with the treatment of acutely undernourished infants. There were many mistakes, he says, and many children died. It’s a specialist technique and a specialist treatment that took much time to develop. Systematization and routinization support the clinician, but, unlike ATFC, this is not a treatment that lends itself to factory-like processes. It takes careful individual focus.

“The main cause of death here is the team,” says Joseph. Human error is to blame for the majority of mortality. It can happen if the team miss a medical problem, or if they don’t administer drugs well, if they are careless with cleaning or inattentive to the hygiene of cups and spoons. It may happen overnight, for example, if the night shift is busy or bedraggled, that they tick the drug dosages as given but they have not been given or not observed. Or it may happen that food is not given by the mother. She might think the baby has had enough and dispose of the remainder. “In some TFC we have 300 kids—TFCs the size of this hospital!” And then the

administration of the milk is very hard. The mothers are responsible for ensuring the children eat in a complete and sanitary way, but you can't coach the mothers individually. So you get a problem of hygiene—dirty cups—and of long-standing milk, that goes off or gets covered in flies. The mothers can also be forced out by poor staffing. If the staff is rude, or insufficient the mothers will leave.

Nights are hazardous. Sometimes the child misses the night feeding or even dies, “maybe the mother slept, or the feeding assistant slept.” A common danger is that babies die of hypothermia. A mother might move in her sleep, uncovering the child. She might not notice the baby in distress. If the night staff do not observe this on rounds, then the patient dies.

“We [improve] quality of care by discussion, by repetition of training.” The medical and support staff receive both formal teaching and coaching on the job. We have to give the staff support to improve. Job descriptions are key to this. Sometimes, if they're doing the job a long time, Joseph says, I'll have them write their own job descriptions, and compare their perception of what their job is against my perception of what they should be doing. This ensures that staff don't get complacent or overconfident in their work.

“For me the team are motivated ... I try to be with them in good collaboration.” Not imposing myself, shouting or managing by force. But all the same, small things can cause big issues. People can be petty. As the in-charge, you have to be above squabbles and adopt a professional demeanour. “They can cry to you, so you cannot cry to them.”

For example, the roster is always an issue. Everyone wants to move their shift schedule around, to maximize leave and so on. Nobody likes night shift. I tried to encourage a member of the national staff to develop skills, so I gave him the staffing roster to do. It caused a huge

drama. One member of staff had one extra day's work that particular month, compared to his colleague. And his name had been alphabetized, to move below that of his colleague. It caused a huge argument until he threatened to quit. Then, when we made their days even, and moved his name back to the top, the situation resolved. That was all there was to it.

The morning stretches on and becomes hot. The mothers move from outside to the interior of the ITFC, more sheltered from the omnipresent flies. The mothers play with their babies, making baby sounds, and chat with others seated nearby. The hospital stay is rest for the mothers too. Away from the fields, household chores and all their regular duties, this is a moment to recuperate and enjoy an easier pace of life.

The paramedic, Du'al, comes in from a meeting. Amsterdam has sent a couple of psychological consultants to the project to attend to the mental health of the staff in the wake of the conflict. The headquarters has a full-time Psychosocial Support Unit (PSU) specialized in confidential counselling for field people who experience trauma or extreme overwork. The psychologists have just finished a group session with the national staff.³⁸

How was it, asks Joseph. "Many bad memories," says the paramedic. He sprawls in a chair, his eyes glaze as he looks inward. We talked about what happened when we fled, Du'al recounts, and the months we spent in the bush. We fled in February and returned in May. And we are waiting for it to happen again. He looks up at me. I still have all my photos and possessions there, hidden in the bush, he says.

After a pause, Du'al muses about a time when there would be peace; he could relax and work a little less. "I will write my novel," he says, and I will call it "Why should I run from my

³⁸ See De Jong (2011) for a full summary of and guideline to the psychosocial and mental health framework employed by MSF-OCA.

government if it is my government?” He smiles, and looks out the window. “My own government is trying to kill me.” I voted for South Sudan’s independence and I came to learn that I was voting against myself, voting to kill myself, because my government came to consider me an enemy.

The Flight

When the community of Leer fled to the swamp in February, local MSF staff—themselves from the community—fled with them. “I for myself, I was running for life, taking the patient and running, all my material in my compound was burning.” Simon Kulang, with MSF Leer since 1998, told me about his flight. “All my shoes remained in my tukul, clothes, even my MSF T-shirts. But I was running with my [nursing] certificate.”

He and others hurriedly packed medical supplies and communications and evacuated immobile patients. No one asked the staff to do this. They just did it. “You can take your family and your children and go without any patients.” We took the patients and I left my children. I knew my family would catch up with me. When they caught up my wife said, “‘Why you left my children at home?’ I said, ‘I’m taking care of patients!’”

They evacuated 12 patients to a bush camp, then arranged for referral to an MSF hospital 100 km distant, on the other side of the river. The team smuggled the patients across the Nile at night.

The staff set up impromptu bush clinics. There were several, at different locations, deep in the swamp or in hidden cattle camps. The MSF team in Juba kept the clinics supplied with medicines. A small plane would lift supplies to an airstrip in a small village. On the ground, the

staff would ferry the supplies by foot and canoe back to the hidden clinics. The foot journeys were 11 or 12 hours, one-way. They traveled only by night, to avoid soldiers.

The teams communicated by satellite phone. They filed weekly and monthly reports, sent registration and consumption records with the airplane. “You took registration books with you?” I ask, incredulous. Simon averred that they had. “We were running there with some books, ... taking some books and medication.”

This emphasis on record keeping in a situation of such extremity I find remarkable; it indicates how deeply the technical processes and procedures of the hospital matter to the Leer staff—that one would abandon every worldly possession, leave one’s children to fend for themselves, but grab for paperwork.

The utility of record-keeping is obvious. Numbers are a technology both of distance and of trust (Porter 1996:xi, 21-22, 89-90). The bookkeeping allowed the team in Juba to optimize the cargo in each plane and gave more insight on the medical condition of the people hidden in the bush. The patient numbers made a powerful moral argument in MSF publicity. But more than this, numbers are a value system and a way of being (Porter 1996:89-90). Record books are talismans. To enter numbers in a ledger is a sign of authority, a soothing, repetitive practice in discomfort, and an assurance to the people of Leer, hidden in the swamp, that they were still counted.

Care after Dying

This section makes a short detour. As Joseph noted, the Leer ITFC was peaceful at the time of my visit. The calm routine was a stark contrast to other ITFCs Joseph had managed, and to other ITFCs in South Sudan at the time.

To give a glimpse to what bedside care is like in moments of duress, I reflect on time spent in Bentiu.³⁹ Although I did not take ethnographic notes during my stay in Bentiu, I did keep a diary; I spent what minutes I could, usually at the end of the day, to note activities and events from the preceding hours.⁴⁰

As emergency coordinator I arrive in Bentiu in a moment of profound crisis. In July 2014, between 30 and 40,000 people squat in a muddy, unserviced field in the UN compound. They shelter from the fierce armed conflict in the town and villages around them. At great personal risk, women venture out during the day to gather firewood and other essentials (men do not venture out at all—for fear of capture as spies). While the World Food Program (WFP) manages to supply basic food, what little water and sanitation infrastructure there is was outstripped in the early days of the displacement. In the rainy seasons, diarrhoea and other infectious diseases spread rapidly. The MSF hospital, a series of tents and makeshift structures, is full to capacity most days. The greatest crisis is in ITFC. Weekly mortality in has, at times, passed 15%. Children

³⁹ I spent June-July 2014 in Bentiu—thus my time there pre-dates the narrative in the rest of this chapter, which is from July-August 2014.

⁴⁰ With regards to the ethics and consent of using this material in an ethnographic context: I did not seek permission from the UN (who hosted the camp) to carry out ethnographic research, but the notes presented here are a reflection on my personal experience as an aid worker and can be considered a personal account; the notes are not coded or included with the rest of my field journals. In this account I have no intent to analyze or pass judgement on the UN, Government of South Sudan or the armed opposition. My time in Bentiu coincided with a period of intense media activity; the events portrayed here have been covered extensively in the press; staff and patients portrayed here also featured in media reporting. The broad acceptance of journalists by the camp communities, the UN and patients themselves I also take to apply to this form of ethnographic reporting. I have nevertheless chosen pseudonyms for individuals and anonymized patient descriptions to include no identifiable features. I have chosen not to anonymize Bentiu itself—since the situation itself is readily identifiable and heavily reported.

die every day. Some days there is only one death, but it is as common to have two or more. I was to help bring the situation under control, as best I could, and hold things together until my replacement could arrive.

The Medical Team Leader (MTL; the chief of medical staff) is Farah, a Dutch-North African nurse and member of the emergency team. Like all of the MSF Bentiu team she is overworked; her typical day runs 15 to 17 hours. She is responsible for the medical integrity of the entire MSF Bentiu program. She must review and implement protocols, ensure medical quality, hire staff, organize trainings, manage supply and attend meetings with the UN and other NGOs. She must analyze numbers, plot medical strategies and draft reports. While the doctors and nurses do the daily work at the hospital, as MTL she visits once or twice a day to look in on things, answer questions and follow special cases, those that might need additional care or resources. It is her pattern. Even in the depth of profound crisis there is routine. On my first morning there I accompany Farah on her daily trip to the morgue.

It is a slow one-kilometre walk from the office to the hospital. The road is mud and the mud is deep and spongy and grabs you. There are dry patches—the sun bakes the mud fast after the rain—and we stick to these islands where we can. The expats say nobody has ever seen mud like this. The locals call it “black cotton soil.” That’s an apt description because it’s like cotton balls steeped in mud: fibrous and peaty and thick. Where the giant aid trucks pass the mud can pile up walls four feet high. It’s exhausting if you have to wade through it.

As we step between the islands of baked mud, Farah explains the situation. With so many deaths, such a limited space, and the heat what it is, it’s imperative to get the bodies out of the compound and buried as quickly as possible. The ITFC children usually die during the night—that’s when quality of care is at its lowest; it’s cold, there are only two nursing assistants on

duty—all that can be spared—they have to watch over two tents full of kids; the mothers and sometimes the nurse assistants sleep. It doesn't take long for a child's condition to deteriorate unnoticed.

Farah makes the morgue trip each morning and sometimes in the afternoon, if needed. MSF prepares the bodies and another NGO is meant to facilitate a transport vehicle and gravediggers. But the other NGO is small and can't always manage this. They have limited resources, vehicles are scarce and often needed elsewhere. So some days MSF supplies the car. Some days MSF supplies the gravediggers too, but it shouldn't be that way. The other NGO does try, genuinely.

Why does she take personal responsibility for this, I ask. This should not be her role. She's the Medical Team Leader, the most senior medic on project. It's a full-blown emergency and there are many other demands on her time. There's nobody else to do it, she tells me. Everyone is busy. The expat and inpat medics are all overloaded. The locally-recruited staff are new. They dislike the mortuary. Some don't treat the bodies with respect, they leave them without names or forget the paperwork. On a nightshift the staff are tired and things aren't done right. The staff are young and proud and some of them think burials are beneath their role and station. Farah says she doesn't want the bodies handled carelessly or left half-covered with arms or legs hanging out. She doesn't want the mothers see that, to be disrespected. Some staff are more careful than others, she says, but you never know who will be on duty when a patient dies. Surely we can employ someone specifically for this task—a custodian, an old person who can spend the night—I ask. No, says Farah, it's a medic's job. She wants the medics to take responsibility for it. There are medical aspects to the job—the death registration and certificate, for example, but more than that, it's part of their duty. They have to learn to do it!

It won't always be like this, she says, but for now it is. It's a slow process of training. There are some in the ITFC that are getting better at the registration process. Soon, once the team has enough time, they will identify specific individuals with the ability and sensitivity to manage burials from start to finish. Until that time Farah will do it herself. We owe it to those patients, she says.

She goes on to tell me about the other issues with burials. The morgue is a temporary shelter. It can accommodate children but as soon as you get an adult body in there it's impossible to move. There was an iron bed frame in there but it took up all the space, so Farah had it moved out. With that gone, at least you can accommodate an adult body plus one or two children.

We arrive at the hospital. In our rubber boots we slog through the mud that surrounds every tent. It's mud, like everywhere else, only a bit worse, a bit sloppier. Here at the hospital, because it's not a thoroughfare, the mud doesn't get tamped down solid; it stays slippery. There is also a race among the agencies to see who can raise their compound the highest. When an agency can afford to pay, and can find time in the schedule of the heavy equipment contractors (who are always busy), the agency will pay to have soil trucked to raise the height of their compound pad. This has the effect of protecting their tents, but increasing the runoff problem for adjacent compounds. MSF is next to some of the big UN agencies and is losing the elevation race. The MSF hospital tents sit atop wooden shipping palettes and drainage ditches crisscross between the tents. On this morning, a couple days after the rain, the place is less a soup than an ill-coloured mousse.

We fetch some blankets from the storeroom before we come to the morgue. The mortuary is a temporary shelter built of cane sticks, about 2x4 meters. It is too small and it is not as sanitary as we would like, but it will stay like this for the time being. The construction logisticians

are too busy to attend to it and timber is at a premium. Even these cane sticks are rare and expensive. What goes to expand the morgue is unavailable for other works. The morgue works okay, compared to other needs. So it will have to do for now.

Farah take the padlock off the latch and opens the plywood door. Inside on wooden pallets and plastic sheeting are three blanket bundles. The pallets keep the children above the mud. Farah clucks her tongue. No names again. She has been after the night staff continually. I finish pulling on my examination gloves.

We go about the work quickly and with little talk. Farah opens the first bundle. The infant is swathed in two of her mother's thin polyester scarves, the typical, inexpensive wrap sold in most every market. The tiny girl wears several hand-twisted yarn bracelets on both wrists, a charm necklace and little gold earrings in pierced ears. Farah slips a rubber-gloved finger under the bracelets to gain purchase, she uses two hands to break them apart. She does the same on the other wrist and with the necklace. She leaves the earrings be. Carefully, she sets the broken charms onto one of the waiting blankets. Lift, she tells me. I slip my left hand under the child's featherweight legs while I support her head and back with the right. I lift her infant corpse a couple inches off the pallet. I raise her head and back first, then her legs as Farah spreads the large, woolly blanket underneath, doubled flat. She squares the thin polyester wraps in the middle of the blanket and smooths them down. I place the child in the centre and we arrange her limbs. I gently pull her legs straight while Farah folds the arms across the chest. While I steady the corpse, Farah swaddles the child in the polyester veils, then closes and tightens the blanket shroud. We lift the bundle and wrap the loose ends of the blanket underneath. It forms a tidy packet; the newness of the blanket lends crisp angles. I place it back on the pallet softly. Farah arranges the bracelets on top of the parcel. She takes extra seconds to neaten them, in the centre, just so.

We repeat the process with the remaining two bundles. As we work we confer softly with each other, but also with the child whose corpse we hold, I'll raise your head now, and slip this fabric underneath. The children are limp, and tinged with a dusty pallor. In places and at the joints, the skin is wrinkled, like the skin of an old person. This is the effect of wasting. The third child is larger, about five years old. It takes more conference to lift and wrap his body, although he is very light. After it is done—the three bundles in a neat row and the last bracelets arranged—we go out into the morning sunlight, already hot.

As we emerge the medical staff inform Farah another child has just died on the ward. We go to attend. The doctor is already registering the death. Farah fetches another blanket and, with the assistance of the duty staff, cleans and wraps the corpse there on the ward. It is easier to ensure adequate care in the daytime, with more staff present. The other mothers are waiting, and once the latest death is cared for, Farah takes the three mothers to the morgue. They sit, heads bowed, on the bare metal bed frame just outside the morgue. Farah goes inside to fetch the bracelets. She emerges with one set of beads and confers with one of the mothers—are these your child's? A nod—yes. Farah takes the mother's hands, presses the bracelets into them, then enters again and returns with the small bundle. The mother holds her arms open to accept it. The process is repeated and then the final body brought out. Each mother receives her child with downcast eyes and silent nods of acknowledgement. There are tears, but no wailing. Farah asks the mothers to wait as she walks to the other corner of the compound to confirm that the vehicle and the gravediggers are ready. They are. The fourth mother is seated some distance away, with family members. Farah goes to check if the paper work is finished for this child. It is. Farah brings the fourth bundle out from the ward, presents it to mother and family, and now there is wailing.

A medic comes with a question, then a couple other staff members come with clipboarded supply forms to be signed and other urgencies. Farah takes five minutes to settle these things, in her gumboots in the mud and sun between the tents. Then she fetches the mothers, four of them, and the little group tramps in a line, Farah in the lead, each mother carrying her bundle to her chest, one after the other through the mud to the LandCruiser. Farah holds the door open as they all pile in, driver, gravediggers and the mothers with their cargo. Farah speaks to the driver and, through translation, to the mothers and gravediggers—everyone is ready? Yes, okay then, go. She waves farewell to the mothers before the rear door of the LandCruiser is pulled shut. The 4x4 slips once, twice, then gains purchase in the mud and off it trundles. This is the everyday life of Farah. A morning ritual. The duty of patient care extends to after death.

I don't accompany the mothers to the burial ground. But in the future, trips to cemetery would become popular among expatriates. It started, at our request, with a couple of MSF Water and Sanitation (WatSan) experts joining out of professional diligence—to see things done right: careful, dignified and sanitary management of the dead, from the ward to the grave. This is part of the WatSan portfolio. But once word got out, some journalists asked to join too, and so the photos are online. The newspaper report I read on the burials is a sensitive portrayal. But the line between the practice of care and the manifestation of concern—in this case through the representation of suffering—had been crossed.⁴¹

As we walk away from the hospital, I fixate on the blankets. I lament to Farah that we don't have proper, white burial shrouds. Instead, we bury children in wool blankets. Heavy blankets shipped for thousands of kilometres—not meant for burials, but to keep the infants and their mothers warm at night. “They're the simplest lifesaving technology there is,” I say. Farah understands, but says that before the blankets arrived the team was burying infants in cardboard

⁴¹ And further crossed in the submission of these events to the anthropological gaze.

boxes saved from the medical store. The blankets are so much better than that, she says. I agree. We need to get a roll of white cotton, I tell her, noting it on my scratchpad. But before that time we should cut the blankets in half. Half a blanket is enough for an infant's shroud. In bare environments the line between care, dignity and bureaucratic parsimony can be very thin.

Care in Extremity

Much of the problematic death rate in ITFC was due to short staffing at night. This was compounded by inadequate training and inattention. Most of the staff were brand new to their posts and most came with little clinical experience.

There was always a senior medic on-call, but the medic slept in the housing compound one kilometre away. The call often came too late. By the time the medic was able to get out of their tent and trek, by foot or car, through one kilometre of mud and frequent rain in the dark, the patient's situation was past grave.

I asked if there was anything to stop the on-call from sleeping at the hospital overnight. Only security—the hospital was 300m away from the camp itself and, though separated by a chain-link fence, thievery, assault and group violence had occurred in the near past, close to the hospital grounds. People in the camp came only with what they could carry. Idle young men were everywhere—without money, education or prospects. The night staff were all from the camp, but the risk profile would be different for the on-call—an expat or South Sudanese person from elsewhere. One could not pretend the risk was equal for all members of the MSF staff.

Then there was the shooting, which was rather common. The bunker at the hospital was not to standard: it was only a sandbagged pit with boards across the roof. While clearly better than nothing, it offered no real protection from stray rounds falling out of the sky.

If we were to put an on-call at the hospital, that person would have to be accompanied. The rules said that expats had to go everywhere in pairs, and at any rate one person shouldn't be expected to sleep alone in the on-call room. With the generator running there was no one to hear you shout if you got into trouble.

Then there was an additional problem of staffing: the on-call was expected to work the next day. If two people spent the night at the hospital, that would be two people unable to work the next day. And there was the final problem—that there was no place for an on-call room. All the hospital tents were full.

In discussion with the team I propose that we run a pilot. The hospital logistics store was housed in a giant Rub Hall tent. There was space there to put a couple of beds. The on-call medic would stay the night and be accompanied by one non-medical person, for comradeship, security and to troubleshoot any logistic issues. Ideally, both people could sleep most of the night, to be active the next day. Clear some space and I would spend the first night at the hospital as the non-medic. Farah would ask for a volunteer to do the on-call. The team agreed this would be feasible. I wrote a quick security analysis and sent it to the Juba and Amsterdam. The green light came back within hours.

The on-call volunteer is Lena, a laconic German nurse whom I barely know. She is a small woman, around thirty years old, self-contained and stylish in an outdoorsy way. She wears piercings and short hair. She has been only a few weeks in the country but has already seen more

bunkers and evacuations than most. I wonder at Lena's silence; we had met in passing weeks before, but she had not said two words to me. What I worried was sullenness I soon learn to be thoughtfulness and introspection. As the night shift approaches we prepare our gear in the office—radios, batteries, flashlights, rain gear—and are soon chatting amicably.

We leave for the hospital about 9:30 pm. We hurry because a storm is about to start. South Sudan's rainy season storms are biblical. You can sense a storm a day in advance—a change in the light and the air. Then you watch clouds tall as skyscrapers roll in for hours and miles. The storms often hit around sunset, and are most beautiful at that time; in advance of the strike they bathe everything in a glowing, lavender light, then hit ferociously.

After dark, we don't see the clouds coming, but the wind gusts tell us we don't have long. In the car on the way down the rain begins to pelt. By the time we arrive in the hospital grounds the gale is fully upon us.

As we disembark, Lena shouts we have to make sure that the tents are secured. If the flaps over the windows and doors aren't fixed the tents will flood. The night watchmen were already at it, but the storm had blown in fast and they didn't get to everything in time. Lena dashes for the hospital tents, while I sling our gear out of the car and ferry it to the Rubb hall.

I throw our bags onto a table, out of reach of mud and rain, then turn to help Lena... but the wind carries the Rub hall doors open like two sails—which they are, essentially; 12 feet tall, made of heavy tarpaulin on an aluminum frame. I pull and pull but can't bring the two doors close enough to throw the latch. Each time I get near the gale inevitably rips one door, or both, from my wet hands. I grasp at one while clinging precariously to the other. I slip in the mud. The giant doors threaten to tear off of their frames. The storm sheets in. I call two of the watchmen

to help. The three of us struggle for many minutes, until finally, with the full weight of a grown man on each door, I manage to throw a rope around the two sides of the latch and lash the doors imperfectly closed. By the time we accomplish the feat, despite our rain gear, we are utterly soaked.

The rain persists. I slog from the Rub hall to the hospital tents. Only one watchman follows me; the other decides he's had enough and goes to the shelter of the tiny, zinc-roofed gatehouse—one man should be on the gate, anyway. I find Lena outside, also soaking. She is working a stubborn toggle on one of the exterior window sashes. “Ach! Diese Regenjacke ist Scheiße!” she curses, as the rain pounds down. With the watchman we struggle with the toggles on the windows and use sand bags to hold the door flaps shut against the wind. When that is done, without pausing, Lena joins the medics to do a quick check of the patients while I make a round of each tent to ensure there is no flooding. Where water does get in I try to better-secure the windows and move power cords and other items out of the way. With help it takes an hour to make sure everything is secure and to finish the initial patient check.

Lena and I retire to the Rubb hall for a short break. By lantern light we peel off our soaking, useless rain jackets and hang them to drip before drying our hair and wringing out our socks. Not expecting to get caught in such a torrential rain, neither of us brought a change of clothes. I brought dry socks but am hesitant to change into them... the rain might not let up. We're soaking wet but the night is not too cold so we should be mostly dry by morning. After our short, standing break we go back to the hospital tents. There are some critical patients Lena needs to attend to.

In the intensive care tent, on a mattress on the floor, one infant is close to death. The nursing attendant crouches down to speak with his mother. The boy, Gatkuoth, is nine months

old. He weighs just over four kilos. He is emaciated, his skeleton visible beneath taut skin. His severe malnutrition is compounded by pneumonia, perhaps tuberculosis too. Despite his tiny size his breath is audible, rasping. His mouth gapes and his eyes protrude. The pulse oximeter, a sensor that measures pulse and blood oxygenation, beeps an urgent rhythm—Gatkuoth's heartbeat.

It doesn't take long for Lena and the nurse assistant to assess the patient. Gatkuoth is hypoxic. His tiny, pneumonic lungs cannot extract enough oxygen from the air he breathes. As a result, his blood carries little oxygen to organs and tissues. His lungs and heart (themselves starved of oxygen, so functioning at deficit) labour more and faster, to try to meet the demand. Pulse and respiration increase further, placing more strain on the weakened organs. Soon, for a patient in Gatkuoth's condition, this will end in cardiac or respiratory arrest.

If he is to stand a chance, Gatkuoth needs to be connected to the oxygen concentrator via nasal cannula. His mother, a woman of less than 20, shakes her head and refuses. The nurse attendant looks to Lena and translates what needs little translation. The children on oxygen always die, he says.

The mother is right, of course. The children on oxygen always die. There are only two oxygen concentrators (fitted with a jury-rigged forked tube they can serve two patients each). Of the 25 children in the intensive care tent, only the most acute get the oxygen. Even with the oxygen, in a place like Bentiu, these children mostly die.

Lena kneels on the floor in her wet clothes and pleads with Gatkuoth's mother. Lena says the children on oxygen die because they are very, very sick. The oxygen is medicine, and we give this medicine only to those who are the most sick. The mother shakes her head, eyes downcast.

Through the interpreter, Lena tries to describe oxygen and hypoxia and how the nasal tube delivers breath.

Gatkuoth's father, a young man about the same age as his wife, draws closer to her. He puts his arm around the young woman, brow furrowed with worry. He touches the baby's cheek. It is rare for the fathers to visit the hospital, much rarer still for them to stay the night. But here is Gatkuoth's father, sleeping on the tarpaulin floor beside his wife and child. Gatkuoth is their first and only child. The pair exchange a few short sentences. The pulse oximeter is a rapid metronome.

Lena stays close to the couple for almost 45 minutes. She briefly stands and attends to other patients and paperwork in the intensive care unit, but otherwise is at Gatkuoth's bedside. She kneels near to the mattress and speaks through the nurse-translator. Much of the time, she doesn't speak at all. The men ease into the background and there is silence between the women. Lena kneels almost in a foetal position, her shins against the ground as she rests her chest on her thighs. She looks up at the mother and speaks softly. The infant is between them. She holds the baby's hand between her thumb and index finger as the mother cradles the tiny boy. It is quiet outside; the storm has passed. The tempo of the pulse oximeter is the only sound I hear.

At the end of Lena's 45 minute appeal, the mother agrees to put Gatkuoth on oxygen. We later learn that, in one of the moments Lena was away, another mother spoke with Gatkuoth's family and showed them her child—now healthier and in recovery—she said the baby was helped by the oxygen machine.

While Lena and the duty nurses do the rounds, fetch medicine, monitor and treat patients I have little to do. Following up on Farah's complaint—that staff do not check vitals or keep

proper charts—I decide to scrutinize the medical records. This is part of my job. As Emergency Coordinator I am responsible for overall program quality.⁴²

I sit at the nursing station in the corner of the tent. The station is a single shaky plastic chair and table, piled with binders, blank forms, a stethoscope and clinical sundries. I find the records as Farah described them: incomplete; vital signs were not recorded for a whole day. The lack of records speaks to a lack of care—or, at least, a lack of care in record keeping.

What does it matter if records are not kept? Should lack of records be taken to mean lack of care? Not necessarily. Perhaps the nurses were so busy attending to their patients they had no time to write vitals down. But other explanations are possible. Perhaps the nurses slept. It's impossible to say for sure. The blank forms are mute. But one can intuit what the blanks mean: vital signs are vital for a reason.

Vital signs are ontological assays. They are the start of how we know what we know about the body of the patient in the most basic physiological sense. Pulse, respiration, blood pressure, temperature—indicators of the body's most basic physiological functions. If our bodies function well, vital signs are normal; that is to say they are within an expected range, quantifiable in numbers, dependent on age, sex, body mass and general health. Even in the ITFC ICU, filled with critically ill infants, most patients' vital signs are normal—within anticipated ranges—most of the time. When vitals are not normal, we know it. One need not be a medic to get insight from vital signs—we all know when a temperature is “high” or a pulse is “rapid”. In the MSF tent it might be the mother who will call the doctor over to say that her child's heart is running fast. Biomedical training allows one to read these physiological registers with more nuance.

⁴² Since the quality of record keeping significantly impacts the quality of patient care, and since I am responding to a complaint from the project's chief medic, I do not consider I overstep confidentiality or duty of care in examining individual patient charts.

Because vital signs speak to the body's basic physiological integrity, they are the start—an obligatory passage point (Callon 1986:205-206)—for every elaboration on biomedical care that comes after. Every single clinical encounter begins with an assessment of vitals in the most rudimentary manner imaginable: is the patient breathing? Does the patient have circulation (they are not blue or deathly pallid)? A patient who walks and talks without significant distress gives a good indication that vitals are normal or near-normal. In this case, vitals may not be measured in numbers, but the clinician assesses them nonetheless. Such an assessment is near instantaneous. As the clinician gains experience, their ability to make visual assessment becomes more profound; in the context of ITFC, when faced with an acutely ill infant, a highly experienced clinician may not need numbers to know what is wrong—they can intuit vitals, based on hundreds of previous cases.

If vitals are usually normal, and if a clinician can assess a condition at a glance, why be so cautious about record keeping? Why write something down when it is almost certain to be normal? Because vitals operate as a warning system; they foretell future danger. In the context of an MSF ICU, a patient can crash (seemingly stable one minute, dead the next). Vitals can be the first and only indication of a patient's near-proximity to death. Vital signs are primarily about trends: if a vital is trending up or down, something is changing physiologically, inside the body of the person. The cause of the change needs to be interpreted and attended to.

This is why the silence—or absence—of vital signs in the records is an outrage. For a medical person to ignore, or be ignorant of, vital signs is an abandonment of the most basic practice and principles of biomedicine.

If one understands why vital signs are vital, monitoring them and writing them down—in a tent filled with 25 perilously undernourished infants—would seem to be the entry point of care. At least, care in the biomedical sense. So we intuit that whoever failed to record vitals does not care. They do not value the value of vitals. Care of the acutely ill in an MSF clinical setting is a matter of routines and protocols. It could not be otherwise.

Lena and the night staff continue working. In addition to Gatkuoth several more patients are acutely unwell. Lena is on-call—which means she is expected to attend only to emergencies and to sleep at some point during the night. But the acuity of the patients is such that sleep seems far away for her.

My utility is past. Around midnight I tell the group that I'm going to sleep, and they can wake me if they need an extra pair of hands. I trek back to the storage shed. In the middle of piles of construction equipment, the logistics team has erected two beds, divided by privacy screens. I strip out of my wet clothes, towel off and crawl under the mosquito net into the crisp, fresh covers of the newly-assembled bed. I quickly fall into unconsciousness.

Lena stays up most of the night. I wake around 5am to find her asleep on the ground. She lies in her wet clothes, between two wool blankets on the plastic sheeting that covers the bare earth. She ignored the freshly-made bed. In her wet clothes, she didn't want to spoil the mattress for the person who would sleep there the following night.

I wake again about 6:45 to the sound of Lena moving around the rear of the tent. I pick up my journal and lie on my stomach, writing these notes from the last 24 hours. I hear the sound. A slow *flap-flap-flap*. It sounds like someone giving sharp snaps to a wet towel to get the water out. It comes from the south, the direction of town. "Keep writing. It's someone in the

hospital,” I tell myself, “drying out a wet towel.” *Flap-flap-flap*. The sound comes again. “Keep writing,” I know I am fooling myself.

I write for perhaps one minute more. Then the shooting starts in earnest. There is the unmistakable report of a Kalashnikov on auto-fire, followed by a chorus of all types—small arms, heavy machine guns, tank guns, anti-aircraft guns and mortars. I slam my diary shut and leave it on the bed. I pull on my wet shirt. Lena is moving past me. She says something about the patients. OK, I say, I’ll see to the stuff. Then she is out of the tent and I throw the essentials together, walkie talkies, batteries, satellite phone, water, granola bars, her bag, my bag. I pull rubber boots on. I move outside—nimble as I can in the mud, fresh and glistening in the morning light—to the sandbag bunker. I uncover the door sheathed in plastic sheeting and smelling like shit (people don’t like to use dark latrines at night) and descend. Some mothers and a couple adult patients are outside in the mud, standing on tip toes, craning towards Bentiu, source of the cacophony. When I emerge, having dropped the bags in a dry spot, they are laughing at me. I catch the word “bunker” amidst their merry catcalls—they were amused to see a white man dashing for the bunker at the first sound of trouble. I laugh and shrug, it’s the rules, we have to go!

The sound of shooting comes from two sides, South and West. This corresponds with the government lines around Bentiu. It is far away and the likelihood of a stray shell reaching us here is slim. In retrospect, I should have anticipated the shooting that morning: heavy rains bog the government tanks. The rebels don’t have tanks, so if they attack after a big rain they neutralize some of the government’s advantage.

The call comes to go to bunker.⁴³ I acknowledge and immediately after hear Farah on the radio to Lena, Farah ordering her to bunker and Lena protesting, just a few more minutes to tend to the patients...

MSF's bunker policy at this juncture satisfies no one. There are UN bunkers near the office and a hastily built MSF bunker in the hospital. The bunkers are meant to shelter from the stray rounds and shrapnel that could fall into the camp in times of conflict. No one expected the bunkers to weather a proximate hit from a heavy weapon. The bunkers were a concession to protocol as much as they were a physical protection. Because the death or injury of an expatriate had a vastly disproportionate impact on the organization (an expatriate death might be enough to close a program), expatriate lives were closely guarded. Expat and inpat staff would need to go to bunker in events like this, but local staff were not required to do so. Patients likewise stayed above ground. While all the people in the hospital were physically equivalent—all equally vulnerable to bullets falling from the sky—they were not morally or philosophically equivalent (Fassin 2007:507).

The danger of this particular event is probably low—the shooting happens several kilometres away—but the organization would not unnecessarily risk expat lives. Nor would they risk the perception that things were not done strictly to security protocol (Stevenson 2014:79-81) The hospital bunker had space for about 20. The team worried what would happen in the event of major fighting, when patients and others might wish to join.

⁴³ As Emergency Coordinator I am MSF's senior security manager on site, but because I was spending the night away I had formally delegated security management to the next most senior member of the team.

I move through the hospital tents, checking all is well and looking for Lena. Farah calls me on the VHF. “Move Two,” she says. “Moving,” I reply. I turn the dial on top of the radio to move to Channel Two.

Farah is anxious. Lena wants to stay in the hospital, she says. She asks me to take her out of the ward and down to the bunker. I’m looking for her, I tell Farah. I find Lena in ITFC, instructing the nurses on urgent care for some of the critical patients. She is moving quickly and looks ready to wrap up. I decide to wait—the shooting is far away. It takes her a minute to finish the instructions and we go down into the bunker. The firing continues in the background.

The bunker is almost as muddy as the rest of the compound. It’s a deep rectangular pit, lined with sandbags and roofed with timber and plastic sheeting. A raised sandbag platform runs around the interior perimeter. We sit in the far corner, the driest spot, and stretch our feet out. We might wait five minutes or five hours. I fish at my bag to produce two granola bars—the deluxe kind—a gift sent in a care package from my wife. I proffer one to Lena, who raises her eyebrows and makes an appreciative noise. Neither of us has eaten a granola bar in months. We chat about life and work and listen to the shooting outside, which trails off in about 45 minutes. The all-clear comes and the workday begins; staff arrive, late, for the handover.⁴⁴

Tousle-haired, bleary, but content, we inform Farah and the rest of the team—no deaths last night. There is a round of congratulations. Bitter jubilation—that we should rejoice at this: for a few hours, no one in our care died. But small things matter—fresh sheets, a granola bar, a quiet night with no deaths.

⁴⁴ I later spoke to the general of the government forces. According to him the shooting was not due to rebel incursion. Rather, because heavy rains can water-log and damage the big guns, firing them is the most effective way to ensure they are dry. Firing the big guns put edgy soldiers on alert, who also began air-firing their weapons, or shooting at shadows moving in the bush. It took the general’s commanders nearly an hour to assess the situation and get it under control. Given the age, discipline and training of the majority of SPLA soldiers, this is an entirely plausible explanation.

The celebration is short-lived. The next night the team loses three children (Gatkuoth is not among them). The on-call, a matronly South Sudanese clinical officer, stays awake all night, moving between a half-dozen critically ill patients. When I greet her in the morning she looks sorrowful; “I lost three” is all she says.⁴⁵

Summary

In the midst of mass emergency, individuals still matter very much; their bodies and experiences are the compositional material of the large-scale socio-political phenomenon that garners all the attention. They are, in the MSF view, the whole point of it. Emergency is addressed through and upon individuals.

When someone is admitted to an MSF inpatient department questions about external states of emergency are inconsequential. Whether they are starving infants, women in complicated labour or young men with gunshot wounds, most people that enter MSF inpatient care are in near proximity to a life-threatening event: a medical emergency. For a clinician faced with such a patient, that individual emergency is prime. Outside of clinical history, the larger socio-political situation that gave rise to that pathology is momentarily irrelevant. The priority is to preserve individual life, and, to the greatest extent possible, physical and emotional integrity. A single body comes to the fore. In theory at least, all of MSF’s transnational medical and logistical apparatus exists to enable these encounters.

⁴⁵ Gatkuoth lived approximately ten days more, before finally succumbing to respiratory failure resulting from malnutrition, pneumonia and probable Tuberculosis. Over 4-6 weeks the Amsterdam headquarters put vast resources to Bentiu and the team managed to reduce ITFC mortality to below the emergency threshold of 5%. This was due to a combination of hospital care (attention to standards of inpatient care), community outreach (to ensure timely arrival) and water/sanitation programs (to reduce infection vectors).

When the person's body becomes the focus intervention, more than the body is at stake. With death close at hand, the character of care can take on extra moral cargo. As the ethnography demonstrates, aid workers often demonstrate deepened concern for the person, for family and for the dignity of the process. These concerns are enacted through an institutional biomedical model, but practitioners attempt, imperfectly, to integrate other sensibilities. The ethnographic examples give some insight into the actions of concerned professional carers who answer to several imperatives at once—duties to their patients, families, fellow staff members, themselves and the institution. The mundane and bureaucratic jostle beside extremes of human experience. This is likely the nature of care in many biomedical settings, but it is amplified in places like Leer and Bentiu.

The deepened moral import of care in extremity may owe its weight in part to the Euro-American conception of life as a good in itself (Fassin 2007:500-501). Yet the preeminent value of human life cannot wholly explain the flavour of humanitarian medicine as it is practiced here—for example, in Simon's abandonment of his family in favour of patients. In addition to a reverence for life, the aid workers portrayed here take another stance that is simultaneously moral and technical in character: the assertion, through action, that patients and families should be accorded a high standard of attention, regardless of likely clinical outcomes. Indeed, the most desperate cases are often accorded more attention. While this attention may take the form of invasive technical procedures, it is just as often expressed through other forms of attendance. At these moments, the goal of preserving biological life comes second to acknowledging personhood. As Farah implied, patients should be accorded respect in dying that they may have been denied in living.

Chapter Six: Care and Technocracy

MSF's medical humanitarian mission to aid those who are most dispossessed makes mass starvation a focus for intervention. Today it is a moral axiom that people should not starve. The dictum is not universally shared; people continue to starve and be starved. MSF rejects this and insists medicine has both the means and the duty to relive some of the suffering and political alienation of those identified as most vulnerable and imperilled.

This thesis examines how those identifications are made. The humanitarian mandate to combat mass starvation may be clear, but questions remain: who starves, how to find them and, once found, what to do with them? In the biomedical model, knowledge is an essential prerequisite to action. As a medical organization, MSF seeks individuals in situations of mass physical, social or environmental violence, variously termed “war”, “famine” or “disaster”. It medicalizes starvation, and other consequences of this violence, as “pathology”. It classifies individuals as “patients” and sorts them into clinical categories based on gradations of pathology. It attends to wounds and hunger as a proxy for attending to the body politic.

MSF's logic is simultaneously technical and moral. In contrast to rationalist enterprises that might claim value-agnosticism (Latour 1993:3, 13-15, 27-29), MSF is explicit and outspoken about the moral character of its technical action. The agency's brand of medical humanitarianism can be viewed as an attempt to operationalize a certain interpretation of the medical ethical ideal (Orkin 2010:26-27). Analysts can highlight other aspects of the institution's work—as activists, witnesses, purveyors of an ideal of human universality—but this study views MSF as representative, first and foremost, of a Euro-American tradition of institutionalized medico-scientific rationality which manifests as a transnational technocracy.

In MSF, the surety of numbers contrasts with the lived experience of humanitarian crises, where knowledge is visibly and pervasively provisional, iterative and reflexive. This ethnography illustrates how humanitarian facts (Redfield calls them “motivated facts” [2008b:131]) are generated by and imbued with values. Through scientific and mathematical technique numbers can imperfectly represent the extent, amplitude and future course of crisis. These humanitarian facts are used to persuade others of the necessity of a given course of action.

Through the empirical technique of anthropometry, individual bodies are compared to a global norm. Statistical averages and robust medical technology allow rapid, routinized treatment of certain forms of medicalized starvation. However, the process obscures (and can be disrupted by) individual discrepancies; the case of Nyajuma illustrates how a healthy body that does not conform to expected measures can confound both the technology and its intention.

Within the Therapeutic Feeding Centre practitioners’ actions put institutional ways of knowing into sharper contrast. Where the institution sees populations—and measures success in terms of patients treated or percentage mortality rates—practitioners are more inclined to see people. Practitioners might consider “success” as lives prolonged, but this is not the only or even predominant concern. The predominant concern of many MSF clinicians, expressed most explicitly by Medical Team Leader Farah, is that patients and families be accorded a high standard of care and attention regardless of outcomes. This duty of care extends even after death. While not captured in numbers, this way of seeing can fundamentally influence the character of care, and thus the nature of knowledge and, perhaps, the character of the institution itself.

The study finds a paradox: rational technocracy is the key enabler of medical humanitarian action and simultaneously a key impairment to medical humanitarian action. The MSF environment tests the limits of the tools and techniques of biomedical rationality. This breeds a kind of rugged empiricism, tempered by personal and professional values. A balance between number-knowledge and care informs institutional knowledge. The problematic practice of rationalist humanitarian biopolitics—a focus of much critical anthropology of humanitarianism—takes on a slightly different character when viewed from this perspective of knowledge and care. The material highlights the provisional nature of knowledge and action in the MSF environment, along with the interdependency of numbers and person-to-person care in making knowledge about medical humanitarian emergency. Medical humanitarianism becomes less a moral assertion—less a projection of power and governance—and more a question of uncertainty, expressions of concern, doubt and indignation; trying to choose the best from among bad options.

MSF's knowledge- and decision-making in crisis is characterized by three predominant factors. I elaborate on these below. Briefly, they are: 1) provisionality, and a subsequent emphasis on self-authored knowledge, 2) numbers as a reification of action and 3) a hybrid institutional structure, which I characterize as a “technocracy of care”.

MSF's hybrid structure has several features that distinguish it from other forms of bureaucracy. These impact the character and constitution of the organization and its brand of humanitarian practice: its mandate explicitly opposes human suffering, objectification and instrumentalization; it defines these experiences as amenable to person-to-person (biomedical) care; it finds them prevalent in situations of severe and prolonged mass exclusion; it projects person-to-person care across international boundaries through a techno-administrative apparatus. It delimits and restricts the possibilities of care through the same techno-

administrative apparatus; it is influenced by members and practitioners; members have latitude to define what care can mean within organizational strictures.

Patient Bodies and Provisionality

Provisionality characterizes environments, structures and decision-making in MSF. In these circumstances the most authoritative knowledge is self-generated; presence is a prerequisite for knowledge, patient bodies become the fulcrum of MSF emergency knowledge. Knowledge flows from the periphery.

The situations MSF works in are characterized by deep uncertainty. Circumstances can change suddenly and drastically, with perilous consequences. Precariousness is a feature of life. This precariousness is reflected in factual uncertainty; one can never quite trust what one knows. Knowledge in and of emergency—more so than other situations—is highly provisional.

Pervasive uncertainty makes knowledge and decision-making in MSF similarly provisional; it is reflexive, collective and iterative. Provisionality is embodied in the character of MSF's interventions, which, as a rule, do not account for long-term goals. Rather they aim for a high standard of biomedical care in the moment—however standards might be defined, at the moment. Provisionality is a response to the precarious nature of existence in the places MSF seeks.

In volatile circumstances, finding out for oneself is a powerful—perhaps the best—way of knowing. Managers incorporate diverse forms of knowledge into decision-making, but place primary emphasis on the institution's own, self-generated knowledge: things seen, documented or verified by MSF. The most authoritative knowledge comes from the field. What MSF people witness (and better, document) in the field has the weight of empirical evidence.

No matter how big the crisis, there is always the chance of an even bigger crisis is just over the horizon. MSF hospitals prepare for future crisis and also act as assays in to distant regions. Outreach has low medical impact, but greatly expands MSF's knowledge and visibility. The field is ever-further. There is always more to know, always a desire for assessment into further reaches of the environment. Knowledge flows from the periphery.

This form of action-knowledge privileges practice; clinical practice in particular, though not exclusively. Epidemiology counts for a great deal, as do other forms of engaged attention. When knowledge depends on presence and (clinical) practice, patient bodies and their pathologies become the fulcrum of MSF's knowledge of emergency.

Since presence and documentation are vital sources of empirical knowledge, action is prerequisite to analysis. In crisis, MSF aims to be first on the spot, prepared to treat patients. Clinical presence is essential; medicine not only saves lives, but makes circumstances known.

This supports Chapter One's assertion that in the medical humanitarian setting knowing and doing—epistemology and ontology—are inseparable. Measurement and observation are a form of action that constitutes the subject. Thus, instead of knowing emergency, it is more accurate to speak of practicing (or enacting) emergency.

Numbers

Numbers are a reification of action. A technology of distance and trust, they put values on evidential footing.

MSF's field experience is transcribed into numbers. Numbers capture some aspect or character of events. They travel well. They are terse, durable parcels transmitted through time

and space, to be interpreted elsewhere by those who share the methods of their making. They engender confidence. They speak with an authority and objectivity that other forms of testimony might lack: suffering is quantified with clarity and impartiality (Porter 1996:ix).

Key numbers can be examined, made and remade in various fora. Numbers are subject to cross-examination, but through this process they are annealed and become stabilized—put into a black-box—they take on the character of fact. Number facts provide an anchor in the swirl of uncertainty.

In the meeting room, a selection of facts are put forward. Certain facts and concerns are promoted as preeminent. These become the basis of further action. This often includes requests for further quantification. In this way, just as numbers embody values (of objectivity, clarity, trust) values come to be embodied by numbers. The choice to quantify is action upon values; what is measured is valued. The numbers on the MUAC tape make a moral assertion: children should not starve.

Things that cannot be enumerated or quantified—the value of humanitarian presence, for example—can be relegated to secondary importance. Yet these aspects of MSF's programs often have tremendous significance. Farah's care for the dead had no measurable impact on medical performance metrics. But her actions expressed the care and concern that the institution seeks to foster. Values, like numbers, retain a comparatively stable character in the midst of crisis. Values too, act as an anchor, but lack the epistemological character of fact.

When values can partially be embodied in numbers, quantification puts morality onto rationalist footing. Many fact-values are codified in protocols: checklists for routinized performance of given tasks. There are protocols everywhere: clinical, laboratory and

pharmaceutical protocols; logistic protocols, human resources and finance protocols; security and safety protocols. Medical and nutritional protocols are prescriptions for action, based upon number-knowledge and normative human bodies.

Protocols can pertain to individual bodies, for example, the need to collect vital signs. They can pertain to populations, for example, emergency thresholds for mortality or malnutrition. Protocols define when action must start, and when it should scale back. Protocols state what is possible and not possible. In this situation, protocols, too, are an anchor in uncertainty. The precarious character of emergency makes paper checklists exceedingly important aids to functionality.

Technocracy

MSF is a medical technocracy. The technocracy simultaneously enables and compromises medical humanitarian action. In contrast to the institution's concern with management through numbers, individual practitioners are concerned with care. This results in a hybrid system: a technocracy of care.

The MSF worldview promotes human universality and scientific rationalism; their Enlightenment-inspired moral stance sees undue suffering and the objectification of people as an affront, not only to personal dignity, but to humanity at large. In this worldview, these injustices can be partially and imperfectly redressed through presence, care and attention in the form of medical practice. As with other motivated, scientific rationalist enterprises, such objectives can only be achieved through institutionalism: collective action through shared structures of meaning, organization and administration.

Because of the emphasis on coordinated action between specialists, MSF can be characterized as a technocracy. This technocratic character grew in step with growth in other parts of the institution. It enables a remarkable breadth and depth of medical action under very difficult circumstances. At the same time, it defines what is and is not possible and (as critical anthropology has shown) objectifies the very people it attempts to care for. Individuality is subsumed into numbers; people are transformed into populations. The process by which this is accomplished has been demonstrated, both here and in other work (Scott-Smith 2013:923-925; Yates-Doerr 2013:63-67).

This ethnography shows practitioners are not ignorant or heedless of this bureaucratic reductionism. Nor do they perceive it in entirely bleak terms; life outside the Machine is bleak enough. Rather, quantification is a tool of medical work, papers and protocols are a means to extend care. The practitioners presented here are not healthcare functionaries, but concerned individuals who attempt to bring expertise to bear—to apprehend circumstances in order to influence a course of events. This engaged attention is a practice of care found at every level of the institution. It is expected of individuals at all points of the hierarchy; practitioners themselves might characterize it as “humanitarian spirit”.

The institution employs the rational tools and methods of bureaucracy, but is peopled by independently-minded carers. The combination makes a hybrid institution that is neither wholly rational in character, nor wholly sentimental. It is an attempt to harness certain technologies and energies in the service of an ethic; an operationalized interpretation of Euro-American medical ethics.

Taken together, this material illustrates how practitioners use numbers, values and institutionally-mandated protocols to make emergency visible. It is clear individual values and

opinions influence institutional *perceptions* of emergency. However, one aspect not fully addressed in this presentation is the question of how and to what degree individual values, motives and representations shape institutional *response*. This is particularly relevant in situations where no accurate numbers exist. Chapter Three gives an example of this when Daniel calls the meeting at Amsterdam headquarters. In the early days of the crisis, numbers were either non-existent or fast-changing. In the absence of numerical clarity, intuition and principles anchored many of the team's decisions, aphorized in Arne's statement, "As an aid worker ... your instinct is to move forward".

Individuals influence the institution, and the institution influences individuals. The precise dynamics of that process are not elucidated here. What is clear is that accounts of bureaucratized, biopolitical compassion (individual perception and agency constrained a structural logic of population health) do not suffice. Among the carers profiled here there is action, not only to influence measurable biological integrity, but personhood as well.

The influence of the rule-bound collective on individuals has been a persistent vexation since the days of Weber. Since Weber, rationalist institutions have been portrayed as the "iron cage" (2005 [1930]:124-125), deterministic constraints on individual agency and perception.

This simplistic portrait of rule-constrained behaviour has been challenged (Bear and Mathur 2015:19). It demonstrably does not hold in MSF's case. MSF's well-known institutional tolerance for autonomy, ambiguity and provisionality means, among other things, that a concerted effort by a group of individuals or one "crazy guy" can change the course of a program (Redfield 2013:188). While members are expected to abide by a code of conduct and administrative norms, they are far from beholden to immovable bureaucratic rationality. Individuals within MSF have the ability to shape the perception and action of the institution—if

they argue persuasively and demonstrably in favour of the group's core values. This is all the more true within the day-to-day life of emergency, where autonomy, rapid action and critical analysis are encouraged.

Thus the evidence presents a problem of how to reconcile individual autonomy within the rule-bound structure of institutions. The role of individuals in bringing certain interpretations of emergency to the fore, while others interpretations are minimized, remains a question for further investigation. With MSF's technocracy of care as a model, I sketch out a tentative model of how one might approach this question and link it to broader work in related fields of anthropology.

Technocracies of Care: Individual practice within institutional structures

Following the dispute that would see his departure from MSF, Bernard Kouchner roundly condemned those that succeeded him as “technocrats of misery” (Barnett 2011:218). The insult implied that the new generation of MSF leadership, which emphasized professionalism and institutionalization, was a species of organizational functionary more concerned with rational management than redress of injustice.

Kouchner's criticism notwithstanding, MSF's move toward greater degrees of institutional structure (and away from Kouchner's swashbuckling media exploits—high profile public appeals, but low in medical impact) enabled MSF's unprecedented, highly complex clinical interventions in remote settings. Yet Kouchner's turn of phrase highlights a tenuous balance in medical humanitarianism: the tension between patient management as opposed to patient care.

This is the source of the central paradox outlined above: that rational, technocratic administration is an essential enabler of contemporary humanitarian action, yet at the same time represents a key threat and potential debilitation of the core aims of humanitarian action (practitioners might say, the “spirit” of humanitarian action).

The term “technocracy of care,” a play on Kouchner’s insult, encapsulates some of the problematic dynamic that exists between the practice of care as performed by professionals and the rationalist institutions that encompass them. I use the concept to shift focus away from debates on humanitarianism as a world-spanning “ethic of life” towards the technicalities of how individuals might interpret such an ethic, and how they might enact that interpretation in practice. I considered several alternatives to the phrase, to call attention to the technocratic character of MSF. Contrary to Kouchner’s critique, the organization is not a “technocracy of misery”; while misery may be pervasive in the MSF milieu, the goal is more than administration of misery. Nor is MSF a “technocracy of life”, because to foster biological life, in and of itself, is not the organisation’s preeminent goal. Nor is it a “technocracy of compassion”, since compassion alone does not account for MSF’s stance of “engaged refusal” towards global affairs (Redfield 2005:329). “Care” captures what matters to people in the institution; an action or way of being in the world that finds expression through institutional channels.

MSF’s technocratic method allows certain Euro-American ethics to be exported through a machinery of transnational administration. The apparatus is capable of feats impressive by any contemporary institutional standard—it can rapidly assess emergency to deploy medical infrastructure to the most remote parts of the world—but at the same time it defines what is visible, valid and possible with the frame of that intervention, and thus to a large degree constricts the sphere of knowledge and action. Thus emergency can only be named and known through the mediation of an institution.

From this perspective, technocracy represents the antithesis of key humanitarian values that promote individuality and person-to-person care. While organized, rational hierarchies and systems of enumeration enable action on a vastly larger scale than would be possible at individual or small-group levels, this same process of hierarchy and scale anonymizes individuals and shapes them to conform with the expectations of the system (Scott 1998:81-83; Scott-Smith 2013:925).

This critique of bureaucratic ways of seeing is at the heart of the powerful, yet limiting “unintended consequences” analysis of medical humanitarianism (Slim 2014:4-5; Ticktin 2014:277-281; Scott-Smith 2015a:25). As outlined in the literature review, many anthropologists have focused on the manner in which the humanitarian apparatus can inhibit, ignore or marginalize individuals, and produce a range of unintended consequences (Ticktin 2014:277). Many of these criticisms are supported by these findings. While humanitarian agencies may promote a rhetoric of human universality, ethnographic evidence from within agencies themselves reveal acute divides between patients, national and international staff: human inequality as an operational practicality (Fassin 2007:519-520). These constraints and inequalities are visible in the ethnography, perhaps most baldly evidenced by my scramble to the bunker with Lena—a privilege and necessity of our status as expats—while South Sudanese patients and staff stayed above ground.

It is precisely this bureaucratic partition, anonymization and instrumentalization of individual lives that MSF’s brand of medical humanitarian morality opposes. Yet, paradoxically, it opposes it through the deployment of a medical humanitarian technocracy that, by nature, partitions, anonymizes and instrumentalizes. From this perspective, MSF can be viewed as a

bureaucracy with a mandate to oppose the anonymizing effects of bureaucracy. This paradox, and the way it plays out in everyday activity, deserves closer attention.

Broadly speaking, contemporary anthropologies of humanitarianism tend to focus on the first part of this equation: how humanitarian administration intrudes into the biopolitical lives of individuals (e.g. Ticktin 2006; Fassin 2007; Agier 2010; Lakoff 2010; Müller 2013). This critique constricts the role of and possibility for individual agency, as people within the system have limited ability to influence structure or outcomes (e.g. Ticktin 2006:33-34; Fassin 2007:512). Comparatively fewer analyses consider how the institution might simultaneously be created by individuals (practitioners and patients alike); how individuals or small groups determine outcomes through active collaboration and imagination, whether on the level of individual patients or on a larger scale. This is an under-theorized junction between at least three anthropological literatures: those of care, bureaucracy and humanitarianism. This thesis hopes to highlight and make some original contribution to this juncture.

Insights from these literatures suggest a practice of institutionalized care—performed most visibly, but not exclusively, in the clinical encounter—can be conceived of as both a product of and partial response to bureaucratic anonymity. By extension, care becomes a central knowledge technique in medical humanitarian emergency.

As outlined above, much of the anthropology of humanitarianism has focused on the constraints and unintended consequences wrought by collective “best intentions” (Ticktin 2014:277-278): the pervasive effects a humanitarian “ethic of life” can have on governance and the biopolitical status of individuals. Where life becomes a supreme good—a good administered through institutionalism—the quality of that life, its biography and the means by which it is prolonged and preserved, fade into insignificance. This has consequences for the nature and

character of care (Fassin 2012:223-224; Stevenson 2014:23-35, 75-83). These insights are of profound importance, in particular as humanitarianism becomes a global force and pervasive moral trope of our age (Barnett 2011:220-224, 232-236).

However, as Clara Han argues, this style of analysis can make for “spaces of perdition” where people’s daily, lived experience fails to be recognized as such. Though people may indeed live in a bureaucratically administered purgatory, they still live, eat, work and care for others; they still interrelate with institutions; they make what they can of life. Han points out that to depict marginalization, suffering and exclusion as pervasive “may elide textures of life and the fragile efforts in self-making that are occurring in circumstances of poverty and how those efforts complexly articulate with institutions”(Han 2012:23, 24).

To speak of “humanitarian ethos” or “humanitarian institutions” is problematic. Both grammatically and conceptually, we attribute thought and action to institutions as if they were individuals. Yet institutions do not think or act for themselves. People think and act within and on behalf of institutions. Conversely, institutions cannot entirely be a vehicle for individual motives. No single president or director thinks for an institution; the thoughts and expectations of others, along with formal charters and guidelines, inform every decision and activity; thought-collectives, in Fleck’s classic sense. As such institutions both enable and constrain individual action, in anticipated and unanticipated ways (Douglas 1986:9-16, 45-47).

Shift the focus to personal relations and technical practices within institutions and a slightly different perspective emerges: how institutional structure might enable individual discernment and action. This study adopts this perspective, as it focuses on how individuals employ institutional tools and techniques to enact humanitarian emergency.

Just as Latour and Woolgar made a sharp distinction between public representations of “Science” and the daily activities of the laboratory (Latour and Woolgar 1986:15-17, 44-52), so humanitarian practice is only peripherally linked to a global humanitarian ethos and the aid industry; it is rooted in how individuals weigh and attend to day-to-day affairs. In the MSF setting, two salient features of this day-to-day practice emerge: care—prolonged attendance to a given person or situation—and the technocratic instruments that surround it.

Though constrained by the institution, aid workers are far from passive dupes of humanitarian false consciousness. There is no doubt that bureaucratic imperatives delimit possibilities and dictate decisions, as has been so convincingly demonstrated in anthropological field studies (Ticktin 2006:37-42, Fassin 2012:225-242). At the same time, a different approach that attends “to the ways in which violence and harm are existentially experienced ... shifts the anthropological exercise.” (Han 2012:23). Ethnographies makes clear that practitioners are not biopolitical functionaries. These are people concerned—not only with stated institutional goals of “saving life” and “reducing suffering”—but with more ambiguous, experiential concepts like “quality,” “dignity” and “duty”.

Because these concepts matter to practitioners they are partly incorporated into numbers and protocols. For example, “quality” and “duty” are encapsulated in the protocol that insists vital signs be appropriately and accurately monitored. Nevertheless, these concepts defy ready quantification. Thus in the face of “bureaucratic ways of proceeding” it is up to individuals to interpret how values beyond bare survival are expressed. They are expressed in Simon’s evacuation of patients, Lena’s lengthy attendance at Gatkuoth’s bedside, but also in Sekai’s careful scrutiny of tables. These practices of attentive, active concern make individual action a personal response to objectifying tendencies of institutional bureaucracies.

This conscientious concern is a form of care. Attendance to the person is adjunct to the technical artefacts and practices of biomedicine that seek to manage the body and pathology. Where medicine aims to restore physical integrity, these individual acts of care value, and seek to re-affirm or re-assert, personhood.

This observation—that individual practices of care nurture personhood in the face of a larger, anonymizing machine—would appear to present a minor challenge to the critique of humanitarian objectification. Few would dispute that many individual humanitarians are motivated by and manifest genuine human concern. This doesn't change the instrumental, biopolitical vitalism of the institutional intervention.

Redfield points out that MSF people care very much “about something they call ‘dignity’”, but life comes first. “Survival”, he notes, “is ever primary” (Redfield 2013:17-18). He argues that this equates to a kind of ontological minimalism wherein urgency trumps respect; necessity brings the essential into focus. Stevenson takes this observation a step further when she identifies a biopolitical imperative to go on living; biopolitical subjects are exhorted to live as part of their proper duty to the institution (Stevenson 2014:8, 96-97).

This study is in broad agreement with those arguments, but adds an observation: dignity slips into the smallest spaces. One finds assertions of dignity everywhere: a jaunty roof on a tukul, Judith's careful washing of a cup, Farah's considered arrangement of bracelets, just so, on the shroud. In moments of duress or destitution, seemingly insignificant acts can take on tremendous significance (Frankl 1984 [1959] 65-68, 106-107; Stevenson 2014:16,154-158).

The dominant strains of the anthropology of humanitarianism put a managerial approach to survival at the centre of the analysis; biological life that can be enumerated, measured and

maintained in a quantifiable manner. Such an analysis holds an inherent danger: it becomes like the thing it critiques, in that it objectifies the subject. When biopolitical or bureaucratic care is the explanatory model, there is little space for biography or self; local people and humanitarian practitioners alike are equally unwitting instruments of a moral power structure. Only the critic—the anthropologist—stays aloof of this troubling biopolitical dynamic. Most anthropologists are aware of this trap and hold on to the tension between individual and managerial motives. They attempt to reconcile the biopolitical manifestations of care with individual lives and motives (e.g. Stevenson 2014:172-174). Nevertheless the limitations of the model are clear.

This thesis shows that, while biopolitical administration is, perhaps, the dominant dynamic of the humanitarian apparatus, it is far from the only force at play. Within this institutional framework of biological and numerical managerialism, we see a welter of other concerns, priorities and adjudications in action. This engaged, focused attention can be characterized as a form of care, a common concern of the practitioners profiled here. In this setting, acts of person-to-person care can, at least partially, redress bureaucratic anonymity. This is not incidental or accidental. It is a deliberate expression of professional practice and of personal values; a human connection within the Machine.

Bentiu was and remains, at time of writing, a humanitarian internment camp *par excellence*—the very object so incisively critiqued by the critical anthropology of humanitarianism. Here we find all the unsavoury aspects of emergency: the objectification and enumeration of lives and humanitarian narratives in full force. Technocratic benefactors govern nameless multitudes, who have next to no input on the circumstances of that government. But here we also find care. Here we find individuals preoccupied, not only with questions of life, but also of dignity and

personhood for those who have been cheated of these things—instrumentalized, objectified, anonymized by forces beyond their control.

Care *about* and *for* a person or situation takes the form of attentiveness, patience and focused action that attends to both *being* (what is) and *possibility* (what could be). When two humans are involved, care is also a means to acknowledge personhood. When focused on care, practitioners try to make what they can of their particular situation and task. They orient to the present and a particular person or phenomenon holds their attention. They usually act in the hope that they can amend the situation, to somehow make it better, to strengthen or reaffirm personhood. But they also act knowing that things may not improve. Things often get worse. Sometimes presence—being there—is the only action one can take (Stevenson 2014:176-177 n.6). Insofar as the welfare of people is implicated by the quality and presence with which aid workers attend to a given activity, their action is a practice of care.

When care is viewed in this manner—as a means of both apprehending and intervening upon reality—it is seen to share similar epistemological and ontological characteristics with other practices examined in this thesis. Like the three bodies—the individual body, the population and the body politic—care can be another register of understanding. It is another way of knowing, valuing and doing in the midst of uncertainty. In the medical humanitarian setting it is not enough to read starvation from the body of an infant or epidemiological perspective. One also needs to care. One should be able to imagine what it might feel like to starve, or to be the parent of one who starves; one should also imagine a possibility outside of starvation. One needs to tend to starvation with the potential for better futures in mind.

This makes the practice of care an essential component of the epistemology of emergency. The idea of care encapsulates many of the values that animate medical humanitarian action—

both ethical and actional. Care is a knowledge technique that informs the composition of emergency. Emergency is made by and through, among other things, a concern for dignity and personhood. All of these registers of understanding form a combination of facts and values that contribute to the conceptualization, definition and enactment of emergency. In this way, the MSF technocracy is an affective mechanism that simultaneously enables and is constituted by the care encounter: a technocracy of care.

Taken individually, MSF's institutional attributes are not unique. The organization's focus on the lives and deaths of others, its transnational character, its technocratic structure, its use of numbers in a path to certainty—all are found in similar organizations active in similar settings. What may distinguish MSF from contemporaries is a combination of attributes and the force with which they are realized: its intense emphases on expertise, care (both as an end and means) and immediacy (in the sense of both action and proximity) (Redfield 2013:241-244). In its medical-technocratic argument for personhood, MSF simultaneously challenges and acknowledges as necessary the bureaucratic anonymization of lives.

This orientation to the here and now has often set MSF apart from other humanitarian actors—and is a distinctive feature of a technocracy of care, as I propose it. Care might hope a better future, but it is focused on the present. Technocracies of care work within the now to realize some near-horizon goal, usually very modest and not at all transformative: a life prolonged or acknowledged. This can contrast sharply with the programs of other humanitarian enterprises.

In the medical humanitarian sphere, MSF's emphasis on personhood might be contrasted with those of the United Nations and related actors who share aspects of the technocratic approach, but view crisis almost exclusively through the lens of population and politics (de Waal

1997:70-72). Similarly, MSF is suspicious of aspirational technocracies that frame wellness and the public good through the lens of the market or harbour ambition to shape the future through medico-economic expertise (Sridhar 2007:504-507; Redfield 2008:135-136; McCoy and McGoey 2011:146-148). These endeavours are not limited to private organizations; anthropologists have shown that government bureaucracies charged with care also orient themselves towards the future and an aspirational (or at least compliant) citizenry (Stevenson 2014:26-31, 77-87; Bear and Mathur 2015:19-21).

MSF may not be unique in its approach to care, its emphasis on human universality and its opposition to human instrumentalization. Other NGOs and religious missions share many features of its care practice. These function on the recognition that the intimate nature of the clinical encounter is an implicit recognition of personhood. To care for the individual is to care for the illness and violence they have experienced—to acknowledge and respond to the person and the personal (Han 2012:26). Future research might examine to what degree the analysis presented here holds for other medical humanitarian actors and to what degree this model of technocratic care can be applied to institutions outside the humanitarian sphere.

Conclusion

This thesis began with a question of seeing and knowing. It ends with questions of being and valuing. This should come as no surprise; how one is and what one values influences what one seeks to know.

What began, for MSF, as a simple ambition to help people in distress has transformed—through the mediation of technology and expertise—into a rational, medico-scientific enterprise

of high order. Much of the technocratic character of this enterprise emerges from the need to know the circumstances of others' suffering.

Frontline clinical care has not changed dramatically in the past fifty years of humanitarian medicine: Victorian pathologies (diarrhoea, undernutrition and respiratory infections) remain the top killers. Careful administration of vaccines, antibiotics and monitored feeding remain the treatment. Certain innovations—the invention of RUTFs, for example—respond to a need, can make treatments more efficacious and can transform methods of care. But the biological fundamentals that medics confront stay the same.

By contrast, the nature of humanitarian knowledge has changed significantly over the same time. The advent of satellite communications, laptop computers and, later, the internet and social media, fundamentally transformed the manner in which practitioners assess, communicate and address needs within affected communities. The entry of statistical methods into humanitarian medicine marked a major shift towards specific forms of expertise, and specific ways of conceptualizing disaster (de Waal 1997:70-71). The voluntarist spirit of the early days of civilian humanitarian assistance changed to one of institutionalized professionalism and technical competency. In this way the object of assessment and care changed. So too has the method of knowing; population level analysis is predominant while biological life and its vital statistics—bodies measured, weighed, counted and corralled—become the dominant focus of intervention and key measure of success (Scott-Smith 2013:293-295).

Under these circumstances, concern for the person can be submerged. The values that motivated practitioners to take up the work in the first place—discomfort with suffering, injustice and instrumentalization—are eclipsed by the methods, techniques and measured outcomes of assessment and treatment. The challenge for the humanitarian practitioner—like

that of any person in rationally-ordered modernity—is one of how to retain, separate or express individual values from within the mechanisms of the Machine. With its emphasis on care and immediacy, MSF has managed to fairly effectively align its institutional purpose with the ideals of many members. Nevertheless, the bureaucratic nature of the organization still rankles many of them.

The ascendancy of technocracy comes from its undeniable power to see, know and intervene on a large scale. While its ways of knowing and intervening may diverge from what many would consider ideal, it is nevertheless effective in addressing—partially and imperfectly—core humanitarian concerns: mass mortality, mass destitution, disenfranchisement, abject suffering and the (usually deliberate) erasure of personal identity.

Though MSF seeks out extremes of human misery, there is no real way to identify who on this planet suffers most, who is the most fragile or the most imperilled. There is no measure to accurately quantify one person's existential risk. But for all its deficits, the MUAC comes close. It is a safe bet that children with a red MUAC are some of the weakest, most disadvantaged, most at-risk-of-eminence-death people on the planet. By extension, medico-nutritional care, which hopes to move the MUAC tape from red to green (or at least to yellow), in the very immediate term, would seem to be a reasonable place to start addressing others' misery.

In public, MSF normally says little about the political and social circumstances that led to the red MUAC. It is well-established that the aid apparatus can contribute to conflict, perpetuate an unsatisfactory political status quo and fails to address root causes (de Waal 1997:1-2,71-72; Terry 2002:217-220; Keen 2008:116-140). The MSF aid workers, and the technocracy they inhabit, are themselves enmeshed in inescapable global networks of interest, consumption and reproduction that prefigure the very instrumentalization and subsequent abandonment of human life that

MSF opposes. In this global system, predictable, preventable, anthropogenic occurrences are labeled “disaster” and attributed the ontological character of nature, chance, surprise and misfortune. Despite this contrivance, MSF runs to attend to the consequences.

MSF people readily acknowledge the contradictions, negative consequences and hypocrisies of medical humanitarian action. But these same practitioners voice uncertainty over what a better path might be. It is hard enough to find a sense of self and ethical space within a global political-economy predicated on human instrumentality, let alone imagine an alternative reality free of personal collusion with such a system. So deeply implicated are we in a global body politic responsible for others’ utter effacement that we have to practice care in places like Bentiu to somehow, partially, alleviate concern for our own individual complicity.

For most of its practitioners, medical humanitarian intervention represents the least-bad of bad alternatives. (Terry 2002:242-245; Mol 2008:90-91; Redfield 2013:237-241). Though misery and disenfranchisement are immeasurable, though the future is bleak and the present moment truly awful, the humanitarian endeavour allows people to express certain values; to live “pitched forward toward what they take to be a better world.” (Robbins 2013:459). For MSF people, to participate in this flawed, overly-idealistic enterprise still measures well in comparison to other ways of living. At least this way one exports a little care in places where it might comfort.

Thus individual motives and values of what is right inform our understanding of emergency, and bring the thesis back to the starting point. They highlight an important corollary, or sub-text, within the opening question, “how do we know emergency when we see it?”

The drive to enumerate, delineate and know crisis questions the nature of reality—“what is the character of the thing?”—and asks how one should confront reality—“what is the

appropriate response to the thing?”—an enquiry that encompasses epistemology, ontology and ethics. It seeks to clarify what is real, what is good, and what is not good. In doing so it implies action, to shape outcomes toward the good. Underlying these all questions is still a deeper query, rooted in personal morality: “how should one live?”

This is the link, mentioned in the introduction, to Robbins’ (2013) proposal for an anthropology of the good. While their subject matters may be diverse, what Robbins’ anthropologies of the good have in common is the “modest aim ... to explore the different ways people organize their personal and collective lives in order to foster what they think of as good, and to ... live at least some of the time in light of such a project.” (Robbins 2013:457).

In undertaking the question of knowledge in and of emergency, this thesis hopes not only to have demonstrated something of how humanitarian facts are made, but also how individual estimations of what is good might figure in the composition of facts. This research hopes to be an adjunct to the extensive anthropological work on humanitarian reason and biopolitics, but also to strengthen the links between this field and others—the anthropologies of care, bureaucracies and the good. Together these fields have much to add to our collective understanding of how we approach and interpret extremes of human distress and manifestations of discomfort and the good in our every day lives.

The events described here are history. Time moves on. Leer was overrun by government troops in May 2015 and again in October of that year. The hospital was looted, but not burned. The community fled again to the bush. Many were killed, including local MSF workers, some of whom I knew. A tentative peace deal has changed little on the ground. Famine looms again this year (Foltyn, 2015; Fakih, 2016; Hopkins, 2016). Bentiu camp remains much as I left it, though instead of 40,000 it is now inhabited by 120,000. Despite this, the gross emergency that Farah

and Lena confronted has stabilized into a humanitarian administration of lives: still precarious, still wretched, but also routine (Beaubien and McEvers, 2016). These developments give some insight on why MSF has been in South Sudan for 25 years, and why MSF will not leave anytime soon.

The MSF people portrayed here have dispersed to places around the globe. I am not in touch with most of them—such is the way in the organization. Colleagues and friends part for years at a time, then meet somewhere and pick up where they left off. I will do my best to send them copies of this thesis. I hope to visit Leer and meet Nuer colleagues there.

I will never know what became of Nyajuma, the parents of Gatkuoth or the other patients and caretakers featured here—I deliberately did not record real names or defining details. Gatkuoth's parents are probably still in Bentiu, though they may have fled for Sudan. With the peace deal there is a chance they might be able to return home to the village, though that seems unlikely in the short term. Nyajuma and her family will be somewhere near Leer, or may have fled to the islands and settlements near the Nile. If she lived through the conflict, she will be seven years old now, or possibly eight. Having survived the first five years of life, with all her vaccinations, she will probably make it to adulthood.

Every day millions of people live events like those described here. This is an account of one place and one time, but around the globe various shades of war, terror, starvation and precarity are experienced first hand, daily quantified in metrics of emergency. Declarations of emergency and our response to those declarations are routine. Emergency is part of our commonplace modernity. Some enact emergency as direct participants, others through media and the vicarious trauma of imagination. In some form, on a daily basis, the majority of people on the planet are confronted with, and compose, some aspect of our contemporary practice of emergency.

Despite the ubiquity of emergency, very few active participants take detailed notes; fewer still take notes with an eye to anthropology. For those who may be far from the epicentre, this ethnography attempts to document some part of the primary, lived experience of emergency. For those who are, or have been, at the epicentre, it hopes to be a tool for reflection. To all readers, I hope it provides a little bit more insight on the situations, organizations and people that compose this pivotal category of human experience.

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Appendix One: Research Information Note

University of Oxford

School of Anthropology
AND MUSEUM ETHNOGRAPHY

51 Banbury Road, Oxford, OX2 6PE



Research Information Note

My name is Darryl Stellmach. I am doctoral candidate at the Institute of Social and Cultural Anthropology at the University of Oxford. I am also an experienced humanitarian relief worker; from 2003-2012 I worked as a field coordinator for Médecins Sans Frontières (MSF). My doctoral research examines how the perceptions, experiences and technical practices of people in Médecins Sans Frontières influence the identification and response to nutritional emergency. The study is entitled *The Practice of Medical Humanitarian Emergency: Ethnography of Practitioners' Response to Nutritional Crisis*. You have received this letter because you are invited to participate in this study. Before agreeing to take part in this study, it is important that you understand the study and how you may be involved.

What is the study about?

This study looks at how social factors (like norms, expectations and interpersonal relations), technical skills and tools (like surveys, diagnostics and epidemiological analysis) interact to enable identification and response to medical humanitarian emergencies. In short, my research asks “when does hunger become an emergency and how does MSF know an emergency when they see it?”

This study is ethnographic, meaning scientific insight is gathered from the researcher’s participation in every day life. Data is qualitative, gathered from interviews and conversations, but also from observation of daily routines and one’s own reaction to events. The ethnographer is present as a participant observer over the period of many weeks and months, watching an emergency response as it unfolds.

The University of Oxford supports the study as part of the requirements toward fulfilling my degree. It is funded through a scholarship grant from the Commonwealth Scholarship Commission of the United Kingdom. MSF has agreed to participate in the study because they hope to gain insight that will improve the effectiveness of their humanitarian interventions. For this reason, they have granted me access to their offices and work sites and will assist the study by providing in-kind support (food, transport, accommodation and medical coverage) while I visit their capital offices and field projects.

How will I be involved in this study?

There are two ways to be involved in the study. First, as a member of the local community, government service or an MSF team, you will interact with me in the role of ethnographer as part of daily life. Those interactions will form part of my experience and understanding of MSF and our shared context. I may reflect upon our interactions. When I write the research text, I may describe our conversation or situation, without using your name or any description that could identify you specifically. If you feel uncomfortable with this, just inform me verbally that you wish not to be included in the study. While you cannot opt out of interaction with me or interaction with others who may be part of the study, you can request that your statements and our experiences be omitted from my notes and analysis. This doesn’t mean I’ll ignore you or never talk to you, but rather that I will not quote or reflect upon our conversations and experiences in the research.

The second way to be involved is to consent to an interview. I will interview you in person. Interviews may take anywhere from 30 to 90 minutes. I will ask you questions and record your answers but this is not a formal checklist-style interview. It will be open and broad, my questions will generally cover organizational philosophy, structures, decision-making and daily experiences of your work in emergency. You will choose the direction of the interview and what we focus on. If you decide to participate, you may choose not to answer any interview questions.

The interview may take another form, where you teach me about a tool or technique that you use in your work. For example, a nutritional assistant could teach me how to calculate weight-for-height measures or an epidemiologist could teach me how to understand epidemiological tables.

Later, after our interview, I will provide you with a summary of what we discussed. I will ask you if the summary correctly reflects what we talked about, if you have any further thoughts, and if there is anything you'd like to clarify or add. This is known as "member- checking."

With your consent, I may digitally record our interviews so that they can be re-reviewed and transcribed (written down word-for-word). Interviews might be audio-recorded, but not video-recorded. During the study, the recordings and transcripts will be kept under lock and key and password protected on my computer. Only I will hear the recordings or read the whole transcripts. Once the study is published, the recordings will be destroyed. Six years later, the transcripts will be destroyed.

What are the risks?

By participating in this study, there may be certain risks to you as explained below:

- Psychological/emotional risks:
 - It may be bothersome or emotionally taxing to have an ethnographic observer present for long periods of time. The research is not intended to be intrusive. I am an experienced MSF volunteer and should fit into the organizational structure with minimal disruption. However, if you ever feel uncomfortable with my presence, just tell me; I will respect your wishes, distance myself and only resume interaction with your consent.
 - In the context of interview or discussion there is the risk of emotional and psychological stress in recounting experiences that you may have found disturbing or traumatic. If you were to feel emotionally distraught during an interview, then the interview would be stopped, and the interview would only reconvene with your verbal consent and at your convenience.
- Social risks:
 - All the information that I collect about you will be kept confidential. I will not make public anything that will identify you unless you give me formal, written consent to do so or if I am compelled by law.
 - During data collection and analysis, I will use an ID number instead of your real name. Only me, my Faculty Supervisor and Ethics Review Board (ERB) would be able to link your ID number with your real name. If the results of the study are published, your name will not be used and your identity will not be released or published without your specific consent to the disclosure. However, despite our efforts, anonymity cannot be guaranteed. For the purpose of analysis, I will have to document the organization that you were with, your role within that organization, and the type of work that you did. Therefore, there is a chance that someone could figure out your identity or the identity of your organization based on our published information.
 - There may be a potential need for me to break confidentiality and disclose information, should any information be recounted (revealed during the course of an interview) or directly observed which might indicate risk or harm to you or patients (e.g. concerns that would require medical intervention or psychological support). If this is the case, I will discuss with you beforehand the need to disclose such information to relevant medical personnel in order to protect your interests.
- Legal risks:
 - This study will deal with hunger and emergency, which can be politically charged and sensitive topics. It is not an audit, consultancy or evaluation to judge the relative merits of a given program, nor is it an advocacy study. This study is in no way designed to pass judgment or apportion blame. Rather, the study will attempt to produce a neutral understanding of the context, relationships and perceptions that impact individuals and projects dealing with nutritional emergency. However, given the sensitive nature of the topic, some people could misinterpret the reason for this study and consider it threatening. To reduce this risk, this Information Letter will be made publicly available and further efforts will be taken to prevent any such misunderstandings.

What are the benefits?

There will unlikely be direct benefit to you for participating in this study. You will not be paid or compensated

for your participation. There may be indirect benefit to MSF, the international public health and humanitarian aid community because the results of this study may be used to inform policy and operational planning. There may be indirect benefit to the scholarly community as this study will inform existing work in anthropology.

Do I have to do this?

Your participation in this study is voluntary. It is your choice whether or not to participate. If you decide not to participate in this study, there is no consequence to you. If you do decide to participate, you may decline to answer any interview questions. If you decide to participate but change your mind later, you may do so without explanation or penalty. You may withdraw from the study up until the end of the human subject participation, which is approximately September 2014, when fieldwork, interviews and member checking procedures will be complete.

What next?

At any time please feel free to approach me with observations or questions. Let me know if you do not want to be included in this research. If you do not want to be included in the study you only need only inform me verbally.

If I approach you to ask for an interview, you are free to decline. If you agree, I will ask you to initial this Information Letter to show that you have read it, and to sign the Informed Consent Form. Then we will arrange an interview time.

What if I have questions?

If you have any questions, I would be happy to address them. You can speak to me in person, or email me at Darryl.Stellmach@anthro.ox.ac.uk. I will do my best to respond to all mails promptly.

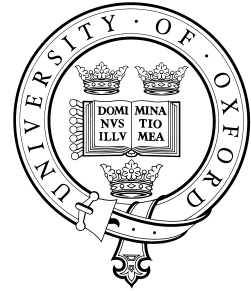
Thank you for your consideration in helping with this research study.

Appendix Two: Consent Form for Semi-Structured Interview

University of Oxford

School of Anthropology
AND MUSEUM ETHNOGRAPHY

51 Banbury Road, Oxford, OX2 6PE



Consent Form for Semi-Structured Interviews

By signing this Consent Form:

I agree to participate in this study entitled *"The Practice of Medical Humanitarian Emergency: Ethnography of Practitioners' Response to Nutritional Crisis"*

I agree I have had the nature and purpose of the study explained to me by the Principal Investigator

I agree to be interviewed at a time to be arranged by myself and the Principal Investigator.

I agree to be (*check one*):

- ☐ quoted with attribution (quoted "on record")
- ☐ quoted without attribution (quoted anonymously)
- ☐ not quoted at all, but to have my responses incorporated in the study as background information

(*If left blank I am assumed to agree to "quotation without attribution"*)

I agree that my participation is voluntary and that I may withdraw at any time.

I understand that I may decline to answer any questions during the interview.

I understand that my interview may be audio-recorded for reviewing and transcribing, that any digital recording will be destroyed upon publication of the study, and that any transcription will be destroyed five years from the completion of the study.

I understand that my participation will have no direct benefit for me and that I will not be paid or compensated for my participation.

I understand that my participation may have certain risks; that, while every endeavour will be taken protect my identity, there is a chance that someone may deduce my identity based on published information.

I understand that the results of this study will be published, and will be made publically available in an online research archive, and that my name will not appear in any of the publications without my explicit consent.

I understand that I may receive a summary of the research results if I so request.

I understand that I can contact the Principal Investigator if I have any questions about this study:

Darryl Stellmach

Darryl.Stellmach@anthro.ox.ac.uk

c/o Institute of Social and Cultural Anthropology
University of Oxford
Wolfson College
Linton Road
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Oxford, UK

Appendix Three: Semi-Structured Interview Question Guide

(Preliminary) Interviewee Biography

Probe:

Understand interviewee's background, how it may influence focus. Set tone and flow of interview

Prompts:

"Tell me about yourself, how did you come to MSF?"

(Part 1) Definition of Nutritional Emergency

"What does 'Nutritional Emergency' mean to you?"

Probes:

Ask interviewee what they understand "emergency" to be.

Ask interviewee why we use the term "nutrition" in this context (and not, for example "food" or "hunger")

Prompts:

"When does hunger become an emergency?"

"What is a 'nutritional emergency'?"

(Part 2) Experiences of Nutritional Emergency to Date

"Tell me about your experiences of nutritional emergency."

Probe:

Ask interviewee to relate experiences with nutrition and emergency response

Prompt:

"What was your first/is your present experience of hunger as an emergency?"

"How did you know the people you were seeing were in crisis?"

Probe:

Ask about MSF's approach to nutritional emergency

Prompt:

"What does MSF do in these situations?"

"How does MSF differ from others?"

Probe:

Ask interviewee to relate their personal reaction to the MSF response

Prompt:

How did you feel?

What were your thoughts about the response?

How easy is it to see or measure crisis and response?

Probe:

Ask interviewee to relate difficulties encountered in intervention.

Prompts:

"What was the hardest part of the intervention?"

"Was the intervention affected (for better or worse) by..."

- The security situation?
- Geography/climate/seasons?
- The language(s) of work?
- Team dynamics?
- Leadership?
- HQ or capital support?

Probe:

Ask interviewee to relate support/team dynamic

Prompt:

“When you needed personal or professional support, where would you go for help/advice?”
“If you or a team member had any concerns about the direction of the intervention, where would you go first for help/advice?”
“Why go there?”

Probe:

Did the intervention respond well to the crisis?
Was there more that could have been done?
Where does/did MSF’s responsibility end?

Prompt:

“How satisfied are you with the outcome of the intervention?”

(Part 3) Strengths/deficits of MSF approach

“How well do you think MSF addresses hunger?”

Probe:

Inquire about MSF technical approach/understanding of hunger

Prompt:

“Is there one thing MSF does better than anyone else?”
“Are there things MSF does poorly/does not understand?”

(Part 4) The end of emergency

“How do we know when the emergency is over?”

Probe:

Enquire how MSF measures/determines when to end the intervention.

Prompt:

“How do we know when a population is no longer at risk?”
“What is a normal level of hunger/risk in an MSF context?”

(Part 5) Future interventions

“How do you envision MSF’s approach to hunger in the future?”

Probe:

Ask how MSF’s response to (nutritional) emergencies is likely to change in the coming years.

Prompt:

“Will things be different in the future?”
“What innovations are occurring in how MSF approaches hunger?”
“What effect will new technologies/climate change have on MSF’s response to nutritional emergency?”

(Part 6) Closing:

“Thank you for your time. Do you have any questions that you would like to ask of me?”

Appendix Four: Glossary of Terms

(MSF) indicates a usage/term specific to MSF and/or MSF-OCA.

(Int'l) indicates a usage/term used internationally/generally in aid and policy circles

ATFC (alt. ATEP): Ambulatory Therapeutic Feeding Centre. Also called Ambulatory Therapeutic Feeding Program (Int'l)

BP5: A high-calorie, fortified emergency food ration biscuit; used for general distribution or to treat malnourished children. (Int'l)

Candidiasis: Thrush; a fungal infection caused by an overabundance of the naturally-occurring candida (yeast). It is often found in people who are immunocompromised and/or nutrient deficient (Int'l)

CAR: Central African Republic (Int'l)

CMT: Country Management Team. The senior management body of an MSF country mission (MSF)

Deputy Director of Operations: Reports directly to the Director of Operations. A member of the MT, supports in management and oversight of all aspects of MSF's field operations, including policy, implementation, safety and security. Responsible for management of half of the OMs (the other half managed by the Director)(MSF)

Director of Operations: A senior director on the MSF-OCA MT, responsible for management and oversight of all aspects of MSF's field operations, including policy, implementation, safety and security. Responsible for direct management of half of the OMs (the other half managed by the Deputy)(MSF)

Director of Resources: A senior director on the MSF-OCA MT, responsible for management and oversight of the departments of logistics, finance, fundraising and human resources, including strategy, policy and implementation (MSF)

ESD: Emergency Support Desk (the "E-Desk") (MSF)

E-Prep: Emergency Preparedness; also the stores, materials and action plans associated with E-Prep planning (Int'l)

E-Desk: Emergency Support Desk (MSF)

Expat: Expatriate; a category of aid agency staff. International staff members of NGOs on international contracts generally governed under the national law of their contracting HQ, as opposed to locally employed staff on national contracts governed by national employment and taxation law. (Int'l)

Explo: Exploratory Assessment (Int'l)

F-75 and F-100: Therapeutic milk products to treat malnutrition (Int'l)

GAM: Global Acute Malnutrition (Int'l)

General Director: In MSF OCA, the most senior appointed executive, director of the MT, directly responsible to the elected board and ultimately charged with overseeing of the day-to-day management and long-term orientation of the organization (Int'l)

HoM: Head of Mission. MSF's country mission director; senior in-country manager and head of the CMT, oversees relations with authorities, all aspects of day-to-day management and long-term orientation of a mission (MSF)

HQ: Headquarters (Int'l)

HR: Human Resources (Int'l)

ICRC: International Committee of the Red Cross (Int'l)

Inpat: In-patriate; a play on "expat". A category of aid agency staff. Generally inpatients are skilled nationals not from the local area of intervention, brought by the agency to implement programs in that location—thus the agency is responsible for their food, accommodation, transport and evacuation while on site. (Int'l)

IPC: Integrated [Food Security] Phase Classification (Int'l)

IPD: Inpatient Department (Int'l)

ITFC: Inpatient Therapeutic Feeding Centre (Int'l)

Kala-azar: Visceral leishmaniasis; a deadly protozoan infection transmitted by sand flies. It can at times reach epidemic proportions; certain regions of South Sudan are particularly vulnerable. The parasite attacks the bone marrow, spleen and liver; it is evidenced by anemia, fever, severe weight loss and the swelling of the liver and spleen.(Int'l)

Kwashiorkor: Oedematous malnutrition. A form of severe malnutrition of uncertain aetiology, characterized by water retention (oedema), recognized as a separate pathology from Marasmus (Int'l)

Local Staff: A category of aid agency staff. As opposed to Inpats, local staff are National Staff hired directly from the local area of intervention. Since they are residents of the locality the agency assumes no responsibility for their food, accommodation, transport and evacuation while on site. (Int'l)

LogCo: Logistical Coordinator. MSF's senior in-country logistic and technical manager; oversees mission-wide aspects of supply, transport, communications technology and physical security (MSF)

MAM: Moderate Acute Malnutrition (Int'l)

Manager of Emergency Support Desk: Head of the E-Team. A member of the MT, oversees all aspects of OCA's emergency response operations, including policy, implementation, safety and security (MSF)

Management Team (MT): The senior operational decision-making body of MSF-OCA (MSF)

Marasmus: Severe malnutrition characterized by emaciation ("wasting") caused by inadequate energy and nutrient intake (Int'l)

Marasmic-Kwashiorkor: Severe malnutrition combining wasting and oedema, caused by a combination of protein, energy and nutrient deficiencies (Int'l)

MedCo: Medical Coordinator. MSF's senior in-country medical manager; oversees mission-wide aspects of medical and public health programs, including strategy, implementation, medical quality, policy, research and staff health (MSF)

Medical Director: A physician and senior director on the MT, head of medical and public health activities and most senior medical decision-maker in MSF-OCA. Responsible for organisation-wide medical quality, research, policy and field support (MSF)

Medical Team Leader (MTL): The coordinating medic at a project level, focal person for all project-level medical communications; often the most senior or experienced medic on the project. (MSF)

MMR: measles, mumps, and rubella (a childhood vaccination) (Int'l)

MMR: Monthly Medical Report (MSF)

MMR: Morbidity and Mortality Review (public health) (Int'l)

MSF: Médecins Sans Frontières (Int'l)

MUAC: Measure of Upper Arm Circumference (Int'l)

National Staff: A category of aid agency staff; staff employed in their country of origin, as opposed to Expatriate staff and Regional Staff. (Int'l)

OCA: Operational Centre Amsterdam (MSF)

OCB: Operational Centre Brussels (MSF)

OCBa: Operational Centre Barcellona (MSF)

OCG: Operational Centre Geneva (MSF)

OCP: Operational Centre Paris (MSF)

OM: Operational Manager : the senior HQ desk officer responsible for a portfolio of several country missions. Reports directly to the Director of Operations (or deputy) (MSF)

OPD: Outpatient Department (Int'l)

Ops: Operations (Int'l)

Plumpy'Nut: A nutrient- and energy-dense peanut-based therapeutic food used in the treatment of severe malnutrition (Int'l)

PC: Project Coordinator. Head of a field project, reports to the HoM (MSF)

PSU: Psychosocial Support Unit (MSF)

Regional Staff: a category of aid agency staff. Technical specialists recruited in major regional centres, either for specific projects or to occupy roles in projects throughout the region as needs arise. In South Sudan the vast majority of regional staff are Kenyan. While they could be regarded as expats, regional staff are recruited under the employment laws of their home country, not that of a MSF HQ and are thus regarded as a separate moral-legal category (MSF)

RUTF: Ready to Use Therapeutic Food (Int'l)

SAM: Severe Acute Malnutrition (Int'l)

Témoignage: From the French; in English MSF discussions generally translated as "witnessing;" a core value of MSF, it refers to the perceived humanitarian duty (in addition to, or in absence of, other meaningful action) to be present at and testify to the suffering and death of other humans. The implication is that suffering takes on greater moral force when witnessed, remembered and spoken of by others (MSF)

TFC: Therapeutic Feeding Centre (a shorthand and older designation for ITFC)(Int'l)

U5s: Children under five years of age (Int'l)

U15s: Children under fifteen years of age (Int'l)

UN: United Nations (Int'l)

WFP: World Food Program (Int'l)

WHO: World Health Organization (Int'l)