

# From neoliberal standards of care to ethical standards of care: the role of numbers in online activism

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**Abstract:** Numbers have been studied as governance and domination tools in the neoliberal order. In this study, we take a different stance and study the ethico-political power of numbers. Relying on the burgeoning literature on counter accounts and Statactivism, we analyze *how numbers can be mobilized to reassert a work ethos through counter accounts*. Our study investigates French public-health professionals' action to denounce New Public Management practices. We use Facebook content (March 2019-21) from two groups of health professionals as data sources. Our preliminary results show that through quantification, health professionals objectify their situation and make visible how they are pushed outside their “ethical-comfort zone”. This research answers recent calls to investigate the ethics of numbers. More precisely, the aim of this research is to contribute to the literature on the use of numbers and statistics in activism by outlining that numbers are not only “political” but can also become “ethical”.

**Key words:** Ethical numbers; Counter accounts; New Public Management; Statactivism; Netnographic

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*Thank you for your understanding.*

## Introduction

Numbers have been analyzed in previous research as governance (McKinlay & Pezet, 2010; Miller & O’Leary, 1987) and disciplinary mechanisms (Brivot & Gendron, 2011; Covalleski & Dirsmith, 1998; Covalleski et al., 1998; Cushen, 2013; Baud and Chiapello, 2017) that tend to overexpose the most vulnerable to unethical and immoral consequences (Andrew, 2007; Baker, 2014; Funnell & Jupe, 2022; Lehman et al., 2016). Specifically, the “overreliance” on numbers into accountability (Andrew, 2007; Shearer, 2002) has been proved to obfuscate - or help separate from - the ethical and moral consequences of some decisions (Andrew, 2007; Chwastiak, 2006; Funnell, 1998; Funnell & Jupe, 2022; Lehman et al., 2016; Lehman et al., 2018; Shearer, 2002). While “*defining an accounting entity has ethical consequences*” (Lehman et al., 2018, p 65) and the ethical dimensions and moral consequences of numbers can no longer be denied (Andrew, 2007; Funnell, 1998), the solution that has recently gained interest in the literature is to supplement - or even replace - numbers with alternative forms of accounts (Chwastiak, 2008, 2015; Lehman et al., 2016, 2018), such as photographs (Gallhofer & Haslam, 2003), videos (Vinnari & Laine, 2017), narratives (Tamina et al., 2021), oral testimonies (Lehman et al., 2016; Lehman, 2019; Twyford & Tanim, 2022) or poetry and pamphlet (Himick & Ruff, 2019). These “counter-accounts” (Apostol, 2015; Gallhofer & Haslam, 2003; Lehman et al., 2016; Thomson et al., 2015; Tregidga, 2017; Vinnari and Laine, 2017) have proved to overcome some of the ethical issues raised by “numerical” accountability. Yet, the ethical potential of numbers *per se* remains understudied.

Following Islam (2021, 2022)’s call to examine quantification from an ethical lens, we here intend to look at the “ethico-politics of numbers”. More precisely, by drawing on a netnography (Kozinets, 2006) of health professionals’ online resistances from March 2019 to December 2022, we plan to recount the way caregivers use numbers to fight against the “unethical implications” of the healthcare system’s rationalization and to promote their own ethic, one in which every human being would be cared for. We address the following question: ***how numbers can be mobilized to reassert a work ethos through counter accounts?***

To inform the “ethico-politics of numbers”, we draw on the concept of Stactavism (Didier & Tasset, 2013, Bruno et al, 2014a), a form of activism that suggests fighting numbers with numbers. This theoretical framework helps us advance that numbers, because they have the potential to bring forward an alternative reality and render visible unfairness (Boltanski, 2014), can help fight the unethical consequences of an outrageous situation but also carry an alternative ethic.

By drawing on a netnography (Salmons, 2021; Kozinets, 2006) of French health professionals' online resistances from March 2019 to November 2022, we plan to understand the way numbers can be used by activists to redefine their profession's but also our society's ethical standards that have been disrupted by New Public Management (NPM) reforms. This study uses online content as a data source for analyzing how health professionals use numbers to challenge the way public hospitals have progressively been turned into "dehumanized places of scarcity" whereby health professionals are pushed outside their "ethical-comfort zone".

Our findings show that quantification allows the two collectives 1/ to outline the consequences of scarcity on the way they practice medicine, and especially the frantic rhythm they are subjugated to as well as the anxiety ensuing from it 2/ to reaffirm their devotion to an ethic whereby any human being would be cared for 3/ to point to our collective responsibility towards the public hospital.

We hope to contribute to the literature in three ways. First, we intend to contribute to the current and emerging literature on the ethics of numbers by providing an empirical example of how numbers can be mobilized in their ethical dimension to challenge some profound societal changes. Second, we plan to contribute to the literature on the use of numbers and statistics in activism by outlining that numbers are not only "political" but can also become "ethical". More precisely, we aim to show how the political power of numbers can help carry and put forward an ethic whereby any life would be cared for. Third, we would like to contribute to the literature on the ethical implications of NPM on healthcare systems by providing a setting whereby activists themselves challenge the ethical implications of NPM.

## **Numbers & Governmentality**

Multiple streams of studies have investigated the role played by numbers and statistics under different umbrella concept, such as 'ethno-statistics' (Gephart, 1988), 'calculability' (Callon & Muniesa, 2005), 'commensuration' (Espeland & Sauder, 2007) or the broader 'sociology of quantification' banner (Desrosières, 1998). As a whole, this research has documented the organizational and sociological operations inherent to calculations. "Entities taken into account have to be detached" from reality, "moved, arranged and ordered in a single space", to be then "subjected to manipulations and transformations" so that "result could be extracted" (Callon & Muniesa, 2005: 1231). Ultimately, "a new entity must be produced (a sum, an ordered list, an evaluation, a binary choice, etc.) that corresponds precisely to the manipulations effected in the calculative space and, consequently, links (*summa-rizes*) the entities taken into account"

(Callon & Muniesa, 2005: 1231). This work involves operations such as classification and categorization so that distinct entities could become comparable—i.e., commensurable. These operations first aimed at “making counting” possible—what is referred to as “first order measurement”—and, in so doing, they allow to aggregate numbers, as well as the “further creation, via statistical and mathematical operations, of ratios and indices” or “second order measurement” (Power, 2004: 771).

Central to organizational and sociological analyses of numbers’ creation and use is the recognition that all fundamental calculative operations are *de facto* political, as they involve the selection—and therefore exclusion or inclusion—of entities from the world in order to put them into numerical forms—the ones that ultimately ‘count’. In particular, studies informed by the Foucauldian approach to power as ‘subjectification’ (Foucault, 1979) suggest that numbers and statistics are politically loaded entities that actually ‘govern economic life’ (Miller, 1992; Miller & Rose, 1990) by shaping individuals as well as organizations. Organizations are approached as “calculative spaces” subjected to multiple audit, control, and accounting practices that aim at making them “governable” internally, or on the behalf of governmental agencies (Miller, 1992; Miller & Power, 2013).

The governmentality narrative is consistent with studies that show how rankings and benchmarking practices profoundly transform organizational behavior from the outside-in (Espeland & Sauder, 2007), as well as with political and sociological works describing the current neoliberal order as pushing individuals and organizations towards a continuous search for performance and improvement (Davies, 2014; Stiegler, 2019).

In the organizational and corporate context, the governmentality approach regards number and statistics as subjugating and all pervasive hegemonic forces, enhancing the domination of a neoliberal hegemonic order, which drive the dominant focus on the search for shareholder value maximization, through processes such as “economizing” (Miller & Power, 2013: 557) or the continuous “financialization of valuation” (Chiapello, 2015: 17).

### **Counter-accounts: Resisting Numbers, Producing Alternative Realities**

In contrast with the subjugation-by-number approach of governmentality studies, other scholars suggest that accounting can be leveraged to destabilize hegemonic power. Such attempts involve the production of “counter accounts” (Vinnari & Laine, 2017) aimed at casting

an alternative light on the status-quo. The usual goal of counter accounts is to move away from unfair—yet perceived as legitimate—practices. De-legitimizing such practices involves shaking public’s social consciousness by showing either what hegemonic narratives fail to convey (Apostol, 2015; Cooper et al., 2005) or what dominant actors allegedly hide (Brennan & Merkl-Davies, 2014; Thomson et al., 2015; Vinnari & Laine, 2017).

Arguably, this stream of accounting studies shares some features with prior research on quantification. Like numbers (cf. Rose, 1991), counter accounts contribute to bring into being—and potentially in the managerial sphere—an alternative reality. In this regard, counter accounts overlap with corporate social and environmental accounts. For instance, both can bring to existence the value of nature by showing the damage of pollution. Both types of account rest on the assumption that organizations’ public transparency is central to a well-functioning democracy (Mehrpooya & Samiolo, 2019).

However, counter accounts differ from corporate accounts in a fundamental way. While discussions on the efficacy of corporate reports has been filling academic debates for some time (e.g. Apostol, 2015; Cho, Laine, Roberts, & Rodrigue, 2015; Deegan & Rankin, 1996), corporate social and environmental accounts differ from counter accounts in relation to their lack of explicit critical motive vis-à-vis the hegemonic power. Prior research suggests that the explicit political partiality of the producers of counter accounts might necessitate caution in the assessment of the claims (e.g., data) produced by such accounts (Apostol, 2015). That said, reliance on numbers of statistics necessarily embodies a political project, regardless of the neutrality their producers (attempt to) portray (Mennicken & Espeland, 2019; Miller & O’Leary, 1987). Accordingly, corporate accounts should be scrutinized with skepticism. Spence (2009) goes as far as suggesting that, to be effective, counter accounts should come from actors who explicitly oppose the hegemony and its dominant narrative. To back this claim, he describes how the move from “social accounting” to “corporate social accounting” has resulted in the co-optation of an initially counter-hegemonic narrative through “the business case for CSR”. This latter approach eventually reinforced the hegemonic role of corporations and, importantly, the status-quo including justification of irresponsible practice in the name of profitability. In conclusion, corporations cannot be expected to use their reporting practices in order to undermine their own hegemonic role (see Medawar, 1976).

Along the same lines, Vinnari and Laine (2017) suggest that the efficacy of counter accounts rests precisely on their absence of neutrality—their power is inherent to their

partiality. Counter accounts aim at making “‘thinkable’ and ‘governable’ those issues currently regarded by organizations as ‘unthinkable’ and ‘ungovernable’” (Dey, Russell, & Thomson, 2011: 66). If such is the case, dominant actors would not only avoid producing anything that might destabilize their own position, but they might also simply be ill placed to identify the “unthinkable” due to their embeddedness in the field and its practical knowledge (Bourdieu, 1990). Following this line of reasoning, counter accounts studies focus on the work undertaken by marginalized actors, chiefly civil society groups (Apostol, 2015; Brennan & Merkl-Davies, 2014; Medawar, 1976; Ridgers, 1979; Thomson et al., 2015; Vinnari & Laine, 2017), but also academics (Cooper et al., 2005) or lower-ranked governmental organizations (Harte & Owen, 1987).

Prior studies of counter accounts identify a continuum of effective accounts to counter hegemonic forces. On one extreme, we find accounts relying on merely discursive techniques. For instance, Vinnari and Laine (2017) analyzed how Finnish activists work to undermine the taken-for-grantedness of animal farming, through the production of videos with little or no text, filmed in secret within piggeries and then aired on national television. These videos elicit the broader public’s empathy by providing an account of the suffering of the marginalized ‘other’ (e.g., pigs) in the normality of a carnivore society. On the other extreme, early studies of “external social accounts” or “shadow accounts” display counter accounts heavily—if not only—constituted by numbers (Dey et al., 2011). Harte and Owen (1987) showed how UK local authorities attempted to fight de-industrialization through numbers assessing the “social losses” inherent to factory closures. These accounts offered microeconomic narratives that could counter the macroeconomic policy views that dominated socio-political debates.

Arguably, most studies of counter accounts fall in between these extreme, and document counter accounts that combine discursive and numerical features, as both aspects reinforce one another to evidence injustice or call for change. For instance, Brennan and Merkl-Davies (2014) show how Greenpeace leveraged a wide variety of narrative and number-based rhetorical techniques to challenge the status-quo in the supply chain of sportswear multinationals. Some key industry members had to revise their practices after the publication by an independent NGO of press releases that ‘narrated’ the ‘numerical’ findings of a shadow account about the use of hazardous chemicals. This campaign therefore points to the role of direct engagement with the industry to position counter accounts.

Prior research indeed suggests that counter accounts' effectiveness does not relate solely to their form (e.g., narrative vs. numerical) but also to the social conditions within which they are embedded, including activists' work of "socializing" counter accounts. For instance, Cooper et al. (2005) analyze the impact of a counter account they produced about the struggles of students to meet living costs by being employed while studying. Even though their counter account report was of an academic standard, its impact on policy-making remained marginal—the level of state support for students was marginally increased, but the "pay-per-use" education narrative remained hegemonic. Reflecting upon this experience, the authors conclude that the success of counter accounts "depend[s] upon the social alliances which they can engage with and their understanding of the social world" (2005: 973). Although scholars have covered some examples of counter accounts, and the use of such practices by civil society groups is increasing, we are still lacking a systematic understanding of the phenomenon (Apostol, 2015). This includes both their production as well as what makes them successful in challenging the status quo.

### **Statactivism: Using numbers for counter accounts**

The potential involvement of numbers and statistics in the production of counter accounts is even more explicit in a burgeoning literature led by the French sociologists Didier and Tasset (2013) who coined the concept of 'Statactivism'—a portmanteau word merging 'statistics' and 'activism'. Students of statactivism analyze how activists rely on numbers and statistics to challenge the status quo and undermine hegemonic order. Similar to counter account scholars, tenants of statactivism are interested in how activists make visible injustice and produce alternative realities. In contrast with the governmentality and counter account approaches, however, statactivist scholars see numbers and statistics as key resources to achieve their ends. Accordingly, they depict individuals and organizations not as passive or unconscious victims of statistics and numbers, which push them to increase their efficiency and performance as the neoliberal order dictates; rather, they consider them as agents that can purposively break from the hegemony set by taken-for-granted statistics by showing that "another number is possible" (Bruno, Didier, & Vitale, 2014: 214).

The arbitrariness, fuzziness and/or incompleteness involved in the construction of any statistics become as many weapons for activists who can cast a different light on taken-for-granted "numerical facts". By fighting numbers with numbers, statactivists can build a new critical expertise, and reduce the democratically problematic asymmetry between technical

expertise and ordinary knowledge (Callon, Lascoumes, & Barthe, 2001). In so doing, statactivists increase their chance to become legitimate voices ‘counting’ during debates.

Statactivism complements studies of counter account by specifying the role of numbers and statistics in the production of alternative realities or the denunciation of unfairness. Within organizational studies, Pochic and Chappe (2019) show how pay equity bargaining has progressed thanks to the use of a sophisticated regression model. The model brought to light an overlooked inequity between the opportunity to promotion of (women) managers and “pink-collars”. Within the sociological literature, Didier (2018) discusses the different experiences in US and French police departments with regard to the implementation of CompStat—one of the first programs used for massively computerized policing. One of the aspects highlighted by the author is that, while this tool was adopted (successfully) to increase efficiency and performance, critics internal to the departments pointed exactly at the results (e.g., growth in specific search practices known as stop-and-frisk) to highlight the increase focus on number at the expense of ethical conduct.

More generally, statactivism studies suggest investigating more closely the use of statistical methods and/or statistical categories, and their influence on the outcomes of activists’ goals. For instance, Currie, Paris, Pasquetto, and Pierre (2016) analyze how activists rework existing statistics together with other stakeholders to increase their robustness and impact. Thanks to community involvement, these authors have mobilized, crosschecked and integrated with new sources of data a number of databases on officer-involved homicides to highlight deficiencies and limits in existing data. The collaboration enabled the production of a stronger narrative—labeled ‘counter data action’—to support the lobbying for a revision of police behavior. Moving away from the subjugation narrative of governmentality, and complementing the counter account approach by specifying how numbers can be involved in the production of alternative realities, statactivism studies suggest that numbers and statistics can inform the calculative politics of activists.

While the political nature of numbers is at the core statactivism, we know less about the ethical potential of numbers. Following Islam (2021, 2022)’s call to examine quantification from an ethical lens, we here intend to look at the “ethico-politics of numbers”. More precisely, we investigate *how numbers can be mobilized to reassert a work ethos through counter accounts?*



## **Method**

### ***Research context***

In this study, we turn our attention to the specific context of French public hospitals where the rise of the New Public Management has introduced a formal rationality that allows health professionals' work to be measurable and quantifiable (Le Theule et al., 2022). While historically, French public hospitals have been organizations whose mission was to provide care for all, even the most vulnerable ones, quantification, which has been enforced through "activity-based payment" and management by objectives, has deeply disrupted the way public hospitals are financed. By focusing on performance measures and an industrial vision of care - the average length of stay, the occupancy rate or the rate of medical activity - these reforms have challenged health professionals' working conditions and given rise to many tensions (Morinière et Georgescu, 2021).

As a result, some protests took shape in March 2019 in several hospitals. By virtue of a snowball effect, these actions rapidly became a strong and collective "inter-hospital" social movement. This was made possible thanks to two main collectives (which are not unions) of healthcare professionals. One of this collective - called "collectif inter-urgences" (hereafter CIU) - rallies professionals working in public emergency care units all over the French territory. It emerged after the perpetuation of many violent assaults on emergency care professionals who were carrying out their missions. While many emergency care units were leading their own protests locally after each assault, the purpose of this collective was precisely to coordinate and aggregate all these "forces" to better challenge the status quo. Another collective - called "collectif inter-hôpitaux" (hereafter CIH) - emerged a few months later. This one gathers professionals working in French public hospitals - and not only in emergency care units - be they doctors, surgeons, nurses, nursing auxiliary, secretaries, stretcher-bearers. These two collectives regularly organize general assemblies that are shared on "Facebook Live" and recorded.

The first collective contends that violence stems from patients and their relatives, being initially very anxious, and eventually losing their temper because of long working hours ensuing from a severe staff shortage. More generally, they condemn the lack of resources that expose emergency professionals to ever higher risks of violence - be it verbal or physical - burn-out and infectious diseases, deprive them from their legal recovery hours, while turning them into "abusive caregivers". They are also very concerned about the bed closings that sometimes condemn seriously ill patients or elderly to wait long hours on stretchers. The second collective insists on the staff shortage and the bed closings that undermine the way

patients are cared for. This lack of resources, they contend, could ultimately subjugate the most vulnerable patients - like children - to higher risks of death (Banerjee, 2008; Jagannathan & Rai, 2021). Both collectives request bed openings, staff hiring, salary increases and a budget raise.

Even though these collectives organize many strikes and demonstrations, it is worth noting that they have a duty of continuity of care and a duty of confidentiality, which both constrain them in their ability to bring their issues into the public space. As an example, going on strike does not consist in stopping their activity but rather wearing an armband on which “assigné” (literally “conscripted”) is written. Their use of the public space is also constrained per se as they are very concerned about leading a non-violent social movement. They then feel deprived from any way to be noticed and listened to carefully by their management, their government but, above all, citizens.

This is how they end up using social networks extensively to raise their concerns. This constraining situation also gives rise to resistances whereby they relay, create, brandish numbers that intend to denounce and challenge their working conditions but also the way patients are cared for.

### ***Data collection***

This study uses online content as a data source for analyzing how health professionals use “alternative numbers” to challenge the way public hospitals have progressively been turned into “dehumanized places of scarcity”. Specifically, we used a netnographic methodology which is defined as a qualitative form of research, based on the analysis of online communities (Kozinets, 2006). This kind of methodology, also called “the ethnography of the Internet” or “virtual ethnography” is inspired by the ethnographic research method as it is used to gain an in-depth understanding of a particular phenomenon. This methodology has gained a growing interest in the literature as it allows the researcher to access a vast data set. This research method is also particularly useful to study the claims of online communities as it provides new ways to observe the narratives of such groups.

One of the three researchers collected the Facebook, Twitter and Instagram<sup>1</sup> content of the two collectives mentioned above, from March 2019 to March 2021, in order to identify the ways health professionals, challenge the neoliberal reforms that intend to rationalize public hospitals. For 3 years now, these collectives have managed their online communities with at

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<sup>1</sup> These are public pages which content is available to anyone willing to have a look at it

least one post per day. These posts relay photos of actions, photos of demonstrations, testimonies, video clips or humoristic cartoons in which numbers are regularly brandished to challenge the status quo.

### ***Data analysis***

Analytical induction (Corbin and Strauss, 1998) seemed appropriate for this study as the process through which numbers are used to challenge the status quo on social media has been understudied. We engaged in a coding process using the software NVivo. We started to code each idea or theme that was directly or indirectly related to the creation of an argument based on numbers or statistics. At this stage of open coding (Maanen 1979), we stayed close to the wording of our informants and data. We then started a round of axial coding which consisted of comparing and grouping ideas which have emerged from open-coding. During this process, the authors discussed their interpretation and contrasted it with the literature, which allowed for a higher level of theoretical abstraction (Gioia et al. 1994). The same process was applied to second-order themes to define aggregate dimensions. These analytical steps consisted of examining first-order concepts and second-order themes and checking whether they could be refined into a more simplified and general analysis. Two dimensions were identified: *humanizing* and *ethicizing*.

### **Findings:**

In this section, we will show how health professionals enter in a battle over what should be measured and how it should be measured (Islam, 2021). In place of cost computations, they create numbers that intend to render visible to citizens the “unethical implications” of the healthcare system’s rationalization.

#### **1. *Humanizing: “We’re humans, not robots”*: using numbers to rehumanize health professionals**

We will show here how the two collectives, through the quantification of scarcity, render visible how relentless cost savings, bed closings and understaffing have subjugated them to dehumanized working conditions that ultimately weaken their mental and physical health. Using numbers, they advocate for a public hospital whereby health professionals would be treated in an ethical way, for we all depend on them at some point.

Looking at the pictures taken during the demonstrations and following the collectives' posts on Facebook, we first identified recurring banners stating "we're humans, not robots" and many posts describing how overloaded they are:

***Press release on June 4th, 2019***

*"In the night from Monday to Tuesday, **the entirety of nurses and half of assistant nurses** from Lariboisière Hospital ECU were on sick leave (...) After two months of strike, **without any answer from the government, caregivers are at the end of their rope** (...) We need to **stop with the vocational image**: being a caregiver is a craft that deserves, as any other craft, decent working conditions (...) Let's not make any mistake: overload is continuous and stems from our health politics. As such, who should we hold accountable?"*

In this press release, shared on facebook, the CIU demonstrates how conveying the vocational image helps hospitals' management and the governments to exploit caregivers amidst general indifference. It is assumed and largely publicized that because it is a vocation, they can bear anything. Instead of standing against their poor working conditions, citizens then pay tribute to their devotion. On the contrary, the quantities advanced in this press release, help to deconstruct this vocational image. Showing that "*the entirety of nurses and half of assistant nurses*" are on sick leaves, allows the CIU to outline that vocation has its own limitations and that health professionals are not ready to sacrifice their health for the sake of "health politics" that lead to continuous overload. Using quantities - and not numbers - also helps them to highlight the breadth of the problem and shock their audience. It is "not only" 10 nurses that are on sick leave, it is the entirety of them. Overall, in this press release, numbers help the CIU advocate for decent working conditions but also show how the problem is generalized.

In other Facebook posts, the collectives go further and showcase numbers that intend to explain why caregivers are exhausted and on sick leave:

***Account from an emergency doctor after a night duty on February 20th, 2022***

*3 years ago, I wrote a first e-mail to Ruffin to warn him about the ECU situation. I had been on duty over the night, I was exhausted, I had had 22 patients to care for simultaneously.*

*Last night, I went up to **27 patients simultaneously under my responsibility. From 6 pm to 6 am, my three colleagues and I welcomed 105 patients, to be added to the hundred already there when we started. Over the 24h, we had to deal with 250 admissions to our hospital ECU.***

*I dealt with a patient who was shot, a 30-years old addict woman who was attacked and whose son needed foster care placement, the assault of one of my colleague by a young patient who tried to steal equipment, an elbow and a shoulder dislocation, **a dozen of nonagenarians who fell down, I can't remember how many hip fractures, a dozen of drunk patients... in total fifty or so patients, maybe more, I don't know.***

*An assistant nurse left for his break with tears in his eyes, considering that what we do does not make any sense anymore. A nurse, working in the unit for 6 years now, who was part of all the demonstrations and strikes since 2019, has left for a sick*

*leave and told me she will never come back to work, neither in this service, nor in the public hospital.*

*(...)*

*It's worse than in 2019. I couldn't imagine it could be worse. **Where will we be in 3 years? 5 years?** Services that close, patients who die on stretchers, it will happen again. We cannot cope anymore...*

*Florian*

Here numbers intend to make the readers experience how caregivers are submitted to an infernal rhythm. The narratives convey different numbers - number of patients, number of hours, numbers of caregivers in charge - that plunge the readers in a metronomic but dramatically accelerating reality. The numbers are also put in perspective with an historical norm (3 years ago) that was already inhuman, while ratios of patients over caregivers (105 patients for 4 caregivers) or ratios of patients over time (250 patients in 24 hours) are advanced to shock the audience. Besides numbers, narratives convey more humanized realities: an addicted woman whose son needs foster care placement, nonagenarians falling and breaking their hips. These stories intend to trigger the readers' empathy by showing that caregivers do not only deal with numbers but with patients who do have a life, an age, a story, a family that can sometimes be overwhelming for health professionals. Narratives also outline that caregivers are themselves human and sometimes crack because of the pressure they endure - "*an assistant nurse left for his break with tears in his eyes*" - even if they had always strived to make things better - "*a nurse, (...) who was part of all the demonstrations and strikes since 2019, (...) told me she will never come back*". The combination of numbers and narratives then create an account that generates mixed feelings - the reader goes from exhaustion to anger and distress - which help rehumanize caregivers by showing the radical emotions they can go through while working. In other words, while the neoliberal reforms, through numbers, have objectified and alienated (Islam, 2021) health professionals, these numerical testimonies render visible their humanity.

To draw attention on the public hospitals' situation and encourage citizens to join their movement, the collectives also share testimonies about paediatrics:

***Testimony during a general assembly of the ECU collective on October 10th, 2019***  
*I am a nurse in paediatric ECU in Lyon (...) First of all, a distinctive characteristic, in terms of numbers, we have **81 000 admissions per year. 220 per day on average. Over winter, we can go up to 380 to 400 admissions for 5 nurses, 6 if we are lucky.** And two childcare assistants. Knowing that in paediatrics, we always need to be 2 people to undertake treatments. We can't prick a child alone, it's impossible (...). We are the ones who decide if the child will wait a quarter of an hour or 8 hours. Waiting time here is 6 hours on average and can go up to 10 hours. A child does not talk, he can't tell if he is in pain, if he feels worse, if he is*

*deteriorating. We have a huge responsibility. Knowing that at the front desk, where we triage patients, **we only have half a day of training by doctors.** One month later, we are doing triage, alone, like grown-ups. **We can admit 25 to 30 patients per hour, in pairs.** Which is a huge average... (...) Of course, like everyone else here, we ask for job openings, it's clear that the more we are, the better we can take care of our children and of our patients.*

Here again, this testimony makes us experience the “robotic” rhythm health professionals are subjected to and the poor conditions in which patients are cared for - “*waiting time here is 6 hours on average and can go up to 10 hours*”. The account is very well informed by daily and yearly figures, but also by seasonal data, that are put in perspective with the workforce - “*over Winter, we can go up to 380 to 400 admissions for 5 nurses, 6 if we are lucky*”. These numbers first intend to objectify the work overload in “a cold way” but are then rehumanized through a subjective experience - “*we can't prick a child alone, it's impossible*” - in order to outline that the difficulties are even worse than the ones numbers suggest. Talking about kids that they call “*our children*” is also a way to move the audience and point to the responsibility they have towards parents and more generally society. This “*huge responsibility*” is then compared to the length of their training - “*we only have half a day of training by doctors*” - to outline how stressful and risky the situation can be - “*a child does not talk, he can't tell if he is in pain, if he feels worse, if he is deteriorating*”. Overall, this kind of numbered testimony helps the collectives to account for an outrageous situation in what they believe to be an “objective way” while at the same time rendering visible their very social experiences that have been denied and denatured by the numbers (Islam, 2021) conveyed in NPM reforms.

The two collectives then point to the consequences of their poor working conditions on caregivers' health. Way before the pandemic, we could notice on images of demonstrations the following quote “*you pinch pennies, we count the dead*” to point to the limitations of cost killings in the health sector. They were alleging that because of their poor working conditions they were much more subjected to extreme violence - patients who lose their temper while waiting - but also to an increased infectious risk. Following the pandemic, the two collectives end up recording the number of health professionals dead because of COVID and advocate for the government to publicize the “official numbers”. In the following quote, an intern representative points to how their mental health has been weakened by neoliberal logics of care:

***Testimony during a general assembly of the ECU collective on October 10th, 2019***  
***- Intern representative***

*The hospital does not provide us anymore with decent working and security conditions. The staff shortage, the lack of resources, the lack of individual and organizational management, and the constant pressure on profitability are all sources of profound moral suffering for our fellows. **Almost 2 thirds of medical students and young doctors suffer from anxiety and more than a quarter show symptoms of depression.***

In other actions, the collectives publicize the number of interns and doctors suicides. They then hold hospitals' management and governments accountable:

***Press release from CIU on June 8th, 2019***

*Burn-out at Saint-Antoine ECU. The board of directors requests its staff to work 18 hours in a row.*

*This evening, **15 nurses and assistant nurses out of 19, exhausted by their working conditions**, have not been able to take over. Three nurses and assistant nurses from the day shift had to stay to take care of patients. The board of directors alleges **it has the right to force them to work 18 hours in a row** while waiting for the next day shift. **This is said, without worrying about these agents' tiredness** who, after more than 12 hours of work, **do not have the ability anymore to undertake their work with the level of focus required when taking care of human beings**. But the board of directors does not seem to be concerned about it. Even worse, it considers that there is no need to reroute patients from Saint-Antoine ECU while its **workforce is cut by half**. This just shows **the board of directors' pure madness, which once more endangers its staff and patients**".*

Here numbers intend to point to the directors' responsibility towards health professionals' health - "*without worrying about these agents' tiredness*" - but also towards the unsecured conditions in which patients are cared for - "*do not have the ability anymore to undertake their work with the level of focus required*". Numbers help them to show that it is their directors that are "inhuman robots" - "*the board of directors does not seem to be concerned about it*" - and put patients and staff at risk.

In the end, these quantifications show how in the "neoliberal vision of care", health professionals are considered as resources that can be endlessly exploited, to the extent that they end up being overexposed to infectious diseases and to death. They also render visible and recontextualize their subjective experience of caregiving.

**2. *Ethicizing: "Give us money, we care for human beings": using numbers to put forward their own ethics of care***

We will show here how the two collectives, through the quantification of scarcity, render visible the way the healthcare system's rationalization has submitted patients to what caregivers contend to be unethical decisions regarding their treatments. We will outline how this quantified "whistleblowing" helps health professionals to put forward their own ethics, whereby each life is worth living and should be cared for.

In many posts, health professionals warn their successive governments by claiming: “give us money, we care for human beings”. While caregivers argue that they have been transformed into “robots”, they also think that public sector reforms have downgraded the quality of care:

« **Testimony from Lena, a nurse:**

*Every morning, when I put my coat on, I ask myself how many beds will be closed, how many caregivers will be missing in the service today, how many patients I will have to take care of because we are not enough, at what time I will be able to leave, and how long I will be able to talk with her, to hold her hand, to answer her questions, to reassure her kids and assist them. Care is much more than a service. We are practicing the most beautiful profession in the world, and I want to keep believing in it. We merely would like to have resources to take care of patients in a human way”*

As a result, they strive for an ethic of care whereby they would have more resources - *we merely would like to have resources to take care of patients in a human way* - and more time “to talk with her, to hold her hand, to answer her questions, to reassure her kids and assist them”.

Consequently, health professionals enter in a battle over what should be measured (Islam, 2021). In place of cost computations, they advocate for a quantification of scarcity and, as such, relay many numbers related to it - the staff shortages, the number of beds closed, the number of emergency care units closed, the equipment missing, etc. - create questionnaires that intend to “quantify” scarcity and its consequences for patients, but also ask for “quantified testimonies” from patients or caregivers. As an example, they regularly relay a map created by Bastamag (see Figure 1) - an independent media - that accounts for the number of beds closed all over the French territory:





**Figure 1: bastamag map used by CIU on October 29th, 2020**

- To this map, they add the following caption:

*“17,500 beds closed in 6 years”*

*Bed closings, enough! No, it's not going well!*

✅ *YES, we need to reopen beds!*

*And it's an emergency!! 🚨*

*Let's preserve the quality and security of care, for all*

This map intends to render the problem visible and show that the problem is not local but rather general. It is a widespread phenomenon that concerns all of us as French citizens and that should be addressed. Through the caption, in which they use many exclamation marks, words that are scary - “it's not going well”, “emergency”, “security” - but also emoticons like a flashing red light, the urgency of the situation is outlined. They also convey a global number “17,500 beds closed in 6 years” to shock the audience and invite citizens to challenge this situation. But for it to become an outrageous number, these bed closings need to be put in perspective. As a result, the collectives try to show how the bed closings have created bottlenecks:

***Testimony from a doctor on December 2019***

*Hello,*

***The situation for weeks to come is extremely preoccupying. The removal of 100 beds with an activity that is steady and even increases over the end of the year***

*celebrations mathematically leads to a congestion of ECU by the “SAS”<sup>2</sup>. As a reminder, a SAS equates to 30 minutes of medical time on average and as much paramedical<sup>3</sup> time. This morning we start with 21 SAS (10 hours of medical and paramedical time), without any staff reinforcement and with an assistant nurse missing. This number is likely to double over this week-end, as over the previous years, all the more so as the flu is coming and GPs are on holiday.*

*Taking care of these patients directly influences the management of the usual flow of patients coming to ECU, leading to delays in caring for patients and a lengthening of waiting time, already increased by the numerous dysfunctions within this hospital. The congestion ensuing from this leads to overcrowded hallways where circulation is difficult and where patients wait in a disgraceful lack of privacy.*

*A serious risk of contamination prevails between stretchers that are adjoining but there is also a serious risk of catastrophe in case of a fire because we can't move stretchers.*

*(...)*

*This email intends to alert that the risk of a serious event is major. As usual, we'll do our best to avoid it, at full price.*

*(...)*

*Yours sincerely,*

*Maurice Raphael,*

*Head of ECU, Hôpital Bicêtre, APHP*

The numbers conveyed here intend to explain how bottlenecks are created, before pointing to their consequences and especially to their “unethical implications”, ranging from a lack of privacy to a loss of chance for patients (see Figure 2).



**Figure 2: Post from CIU**

<sup>2</sup> Service d'accès au soin: Le service d'accès aux soins est un nouveau service d'orientation de la population dans leur parcours de soins. Pour le patient confronté à un besoin de soins urgents ou non programmés et lorsque l'accès à son médecin traitant n'est pas possible, le SAS doit permettre d'accéder, à toute heure et à distance à un professionnel de santé. Ce dernier pourra lui fournir un conseil médical, lui proposer une téléconsultation, l'orienter selon la situation vers une consultation de soin non programmé en ville, vers un service d'urgence ou déclencher l'intervention d'un SMUR ou d'un transport sanitaire

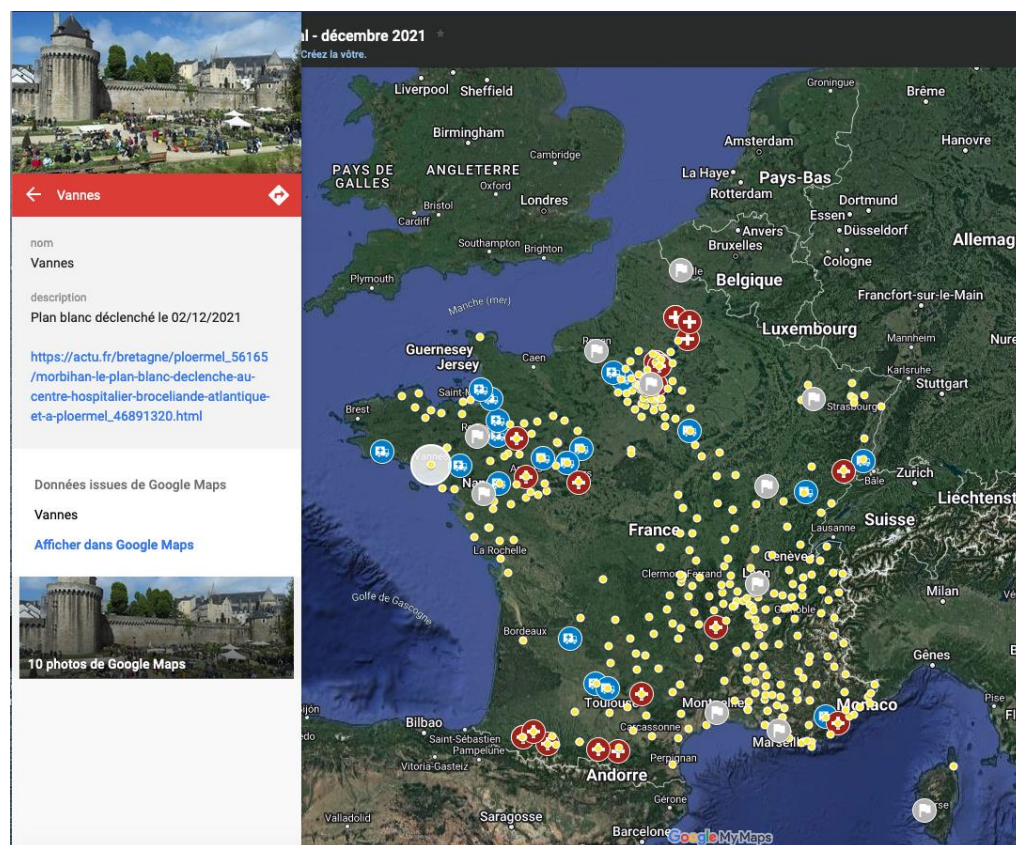
<sup>3</sup> In France paramedical time refers to the work done by nurses and assistant nurses

*Caption: “Lying on a stretcher for more than 5 hours causes serious skin complications. For bed reopening, join the CIU”*

To this caption, they add in a comment: *“the risks associated with stretcher hospitalizations have been largely documented by international literature: a 9% rise in global mortality, a 30% rise in mortality for critically ill patients. This is without saying that there are other risks than mortality: delays in care, delays in pain management, etc.”*

Here numbers serve as a biological norm - *“lying on a stretcher for more than 5 hours”* - but also help highlighting the risks for patients - *“a 9% rise in global mortality, a 30% rise in mortality for critically ill patients”*. The collectives are experts in medicine and want to render visible through “physical numbers” what is hidden by “accounting numbers”. In other terms, they try to put forward alternative numbers that highlight an alternative reality and enter in a battle on what should be measured and by whom (Islam, 2021).

As a result, they create a map - that they update everyday - identifying all the hospitals where medical care access is downgraded, all over the French territory (see Figure 3).



**Figure 3: Map showing all the hospitals where medical care access is downgraded**

In a post in December 2021, they shared a link pointing to this map and added to it a quantified caption: “112 hospitals in “plan blanc”<sup>4</sup>/ 33 emergency care units partially or totally closed / 20 emergency care units on strike. This observation is factual and, dear users, it corroborates the difficulties that we face on a daily basis to access an emergency care unit or a hospitalization bed. We will update this map everyday. Please share with us the daily situation in your own hospitals”. These numbers allow them to show how widespread the problem is. This map also renders visible the unequal access to care on the French territory, to the extent that some patients are transferred in other hospitals in unstable conditions and that health professionals have to resort to “triage”:

*“As required by medical ethics (they here refer to the article 25 of european medical ethic), we, pediatricians and caregivers specialized in children, would like to draw the attention of the collectivity and governments to the endangerment of patients and especially children these days. The public hospital crisis and its pauperization expose first and foremost, as usual, the most vulnerable patients and especially children. **95% of children that need to be cared for at the hospital, are cared for in a public hospital**, without any other alternative, all over the French territory. 800,000 children are born each year in France and our country is proud of its natality rate; provided that we can ensure their future. (...) Today, **hundreds of beds are closed in pediatric units** because of administrative decisions or staff shortage. This situation of crisis is now experienced on a daily basis by pediatric units as a battlefield medicine: **choose which child to hospitalize first and foremost, differ vital surgeries (fracture, appendicitis, head trauma and sometimes even organ transplant or cardiac surgeries), transfer unstable children in ICU 200km away from their home, keep children in non-specialized and under pressure services, for lack of a bed available in the proper service, with a real loss of chance and even a vital risk for the patient. (...) In pediatric ICU, all over the French territory, the situation is highly critical. Recently, in a parisian ICU receiving the most severe cases, the most senior nurse had 6 months length of service! Another ICU service has refused 35 patients in a week (...) because of 4 beds closed. In another service, 4 beds are also closed for staff shortage. (...) That a child dies because of a severe and incurable disease is a difficult reality, yet part of our job. That a child risks dying or undergoing severe aftereffects because of delayed care ensuing from a lack of resources, is an injustice that is incompatible with our Hippocratic Oath as well as with our professional engagement. It’s heartbreaking for any of us and our responsibility to denounce it”**.*

The first author received this leaflet in November 2019, while her daughter was hospitalized in a pediatric unit after an episode of convulsion caused by pyelonephritis. She went through the letter, and it made the effect of a bomb into her stomach. Knowing that some children were not cared for as well as her daughter was heartbreaking. The numbers conveyed made visible an outrageous reality to the first author: one in which parents were waiting for

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<sup>4</sup> This system is a way for a hospital to respond to a major sanitary emergency situation. It allows immediate mobilization of the necessary resources, of any nature, in case of massive influx of patients or victims. It can be activated for a major accident, a terrorist attack or for winter epidemics.

vital surgeries or sent 200km away with their ill children. More generally, by rendering visible these transfers and these “triages”, quantification here intends to show how NPM reforms have rendered some of our lives “unworth living”, and subjugated the most vulnerable patients, even children, to an overexposure to the threat of death. They then try to rally as many citizens as they can to their “ethics”:

*“Jacqueline, 90 years-old spent 24 h on a stretcher. Jacqueline is one of us’ grandmothers. She could be yours. Give us money, we care for human beings”.*

*“Would you like to be cared for, at 70 years old, by a nurse on duty and alone for 40 patients? To undergo an operation with a surgeon that has not slept for 48 hours? Live in a town where you need to wait 1 year to get an appointment with a doctor or a dentist? Yet, it will happen. These outrageous situations are already the daily lot of many French citizens” (a post from CIU on December 13th, 2019).*

Besides helping the collectives to reaffirm their devotion to an ethic whereby any human being should be cared for - even “Jacqueline, 90 years-old” - the numbers used here, associated with a poignant narrative, intend to show that we all depend on the public hospital at some point, either because our relatives will be sick - “Jacqueline is one of us’ grandmother” - or because we will ourselves be sick one day - “would you like (...) to undergo an operation with a surgeon that has not slept for 48 hours”. By triggering fear, they outline we are all made vulnerable by the deterioration of the healthcare system and that we share a collective responsibility towards it. The numbers then invite any of us to stand for the public hospital and embrace an ethic whereby any life would be grievable (Butler, 2009).

In the end, these quantifications show how in the “neoliberal vision of care”, the most vulnerable patients are overexposed to the threat of death (Mbembe, 2005) and carry an ethics of equality towards care.

## DISCUSSION

This paper provides an account on how numbers can be used to signal and define the boundaries of a work ethos. By analyzing the online activism of two collectives of health professionals, we show that two main processes are developed by activists. First, they engaged in a process of *humanizing* their work by highlighting through numbers and quantification how the work conditions in hospitals could not be borne by any human being. Second, our data revealed a process of *ethicizing* from health professionals who use numbers to emphasize and create a contrast between what they think should be an ethical way of working and their current way of



working. By doing so, they implicitly define with numbers what is their work ethos. In that extend, they produce counter accounts which represent this alternative reality where the resources will be adapted to the level of care they want to provide to patients. They use numbers to create this alternative reality where their work conditions would be different. Numbers are a means to create and develop this alternative reality where health professionals could work according to their own ethics.

In that regard, our setting provides a case where an epistemic use of numbers (Islam, 2021) emerges to challenge the economic use of numbers. Specifically, health professionals relay numerical testimonies and create a numerical toolbox whereby numbers intend to give visibility to their day-to-day reality, one in which they are endlessly exploited and care is impaired by rationalizing numbers. Concomitantly, the numbers developed by health professionals help carry an ethic whereby anyone - including health professionals - would be cared for and point to our ethical collective responsibility towards public hospitals.

We hope to contribute to the literature in three ways. First, this paper enriches the current and emerging literature on the ethics of numbers (Islam, 2021; Islam & Greenwood, 2022) by providing an empirical example of how numbers can be mobilized in their ethical dimension. More precisely, we show how “reflexive numbers” (Boltanski, 2016 cited in Islam 2021) - that we see as numbers which are designed by those who are measured and who are the experts of the field (Islam, 2021) - can help transform those who are measured from objects to subjects. Second, this paper contributes to the literature on the use of numbers and statistics in activism (Pochic & Chappe, 2019; Currie et al., 2016; Didier & Tasset, 2013; Bruno et al., 2014) by outlining that numbers are not only “political” but can also become “ethical”. Specifically, we aim to show how numbers when they support social critique (Islam, 2021) can help carry and put forward an ethic whereby any life would be cared for. Third, we hope to contribute to the literature by showing the role that emotions play in rendering numbers “ethical”. Our findings outline that numbers, combined with narratives, can create emotions - ranging from anger to sadness or fear - that trigger empathy and, as a result, encourage any citizen to embrace health professionals’ ethics.

In this paper, we focus our analysis on the use of numbers to create an alternative account of health professional working conditions. We analyze how numbers trigger emotions and define what the ethos of health professionals is. However, the impact of the only activism of the collectives we have analyzed has not been analyzed. Further research could explore the impact of online activism and the creation of counter accounts with numbers on the social and

political context. More generally, the analysis of use of numbers in the development of counter accounts could be extended in the future.

In terms of implications, this research shows how numbers can be used with the aim to create an emotion and engage with an audience who is somehow concerned or at least impacted by the situation.

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