

6.15%: Taking Numbers at Interface Value

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Abstract

This article discusses a number, 6.15%, as it comes into being in the course of an evaluation study of education in a southern Afghan province. This number indicates that out of 100 school-aged girls 6.15 go to school. While this kind of number may invite reflections on its epistemic accuracy, more often it draws attention to its inherent negative — the girls that do not go to school — substantiating a need for sustained international commitment. As this article will show, numbers work to establish girls as research entities, as part of populations, and as a concern for the Afghan government and the international intervention. This interfacing work of numbers — between girls, states, interventions, and research protocols — is often absent from academic work that takes numbers to be stable and passive tools with which the world can be known. This article, instead, takes numbers to have an internally complex multiplicity and to actively engage with their environments. In this article, I use the interface between numbers and environment as a space for ethnographic exploration of world-making. By describing three moments in the lifecycle of the number — data cleaning, analysis and presentation — I describe three distinct moments of interfacing in which the number comes to act in three capacities: effecting reference, constituting proportional comparison, and evoking doubt and certainty. Detailed understanding of numbering practices provides an opportunity to not just critically assess numbers as end products but to carefully assess the worlds that emerge alongside numbering practices and the ways in which numbers contribute in processes of governance.

Keywords: numbers, referentiality, percentage, proportionality, certainty, doubt, Afghanistan

Introduction

In 2013, NATO and the US troops were about to draw their 12-year military presence in Afghanistan to a close, Afghan and international audiences, policy makers, academics, journalists, and aid workers were asking the question whether or not the intervention had been successful. In a piece in the New York Times (NYT, 2013), Vanessa M. Gezari boiled the international difficulties in Afghanistan down to one issue: American soldiers fail to understand Afghans. As a successful

intervention relies on good intelligence this is a problem. Gezari, therefore, called for a renewed involvement of anthropologists, whose core skill is to understand across cultural, linguistic, and social borders. These anthropologists would be able to help decipher Afghan metaphorical and allegorical conversation, full of parables and jokes that “[are] nothing like the Excel spreadsheets and acronym-heavy briefing slides that military people are trained to read.” (NYT, 2013).

The contrast that Gezari evokes is a classic one. The straightforward world of Excel — the numbers

Working Excel Sheets in Afghanistan

GPS	MoE School Code	Picture code	NO	Name of School	Teachers in area that do not teach	Reason I for not teaching	Reason II for not teaching	Reason III for not teaching	Reason IV for not teaching	Boys		
										Total	Attend School regularly	Attend School occasionally
	0		24	Attachement of Babur Quli School								
	0		25	Malizai Sufia	0	0	0	0	0	88	53	22
	0		26	Sarkham Ulya	2	low salary	have other	0	0	114	81	23
N_32.62848-E.065.89783	0	29	27	Sola Koochian(Koochian Sola)	0	0	0	0	0	119	84	15
	0		28	Nawabad Koochian School	2	low salary	have other	0	0	61	0	0
N_32.63043-E.065.91003	0	30	29	Sarchakili Giris(Naswan Sarchak)	0	0	0	0	0	0	0	0
N_32.63158-E.065.89927	0	28	30	Sarchakili Boys(Zkur Sarchaklia)	0	0	0	0	0	89	56	12
	0		24	Jangi Kariz	0	0	0	0	0	142	113	16
	0		16	Sadmurda Ulya	2	low salary	threats	0	0	65	46	9
N_32.1231-E.065.93015	0		35	Garmab Sufia	0	0	0	0	0	221	185	14
	0		36	Shna Waia								
	0		37	Charamgar(Neswan Charamgar)	0	0	0	0	0	0	0	0
	0		38	Sajawal	5	threats	0	0	0	151	0	0
	0	13	39	Sadmurda(Sadmarda Sufia)	0	0	0	0	0	95	0	0
	0		40	Markazi Madrasa								
	0		41	Haram Shah School								
	0		42	Sinan School	0	0	0	0	0	90	0	0
Sm N32.53760 – E065.676	0	11	43	Mir Baba(Kata Khanjak Mirbaba)	0	0	0	0	0	92	73	14
	0		44	Wani School								
	0		45	Sabzabad	0	0	0	0	0	54	0	0
	0		46	Kata Khanjak Madrasa								
N_32.36.739-E.065.53.464	0		47	Darululum	0	0	0	0	0	347	298	31
N_32.63066-E.065.87344	0	21	48	Sidai Khan	21	low salary	have other	0	0	1625	1468	77
	0		49	Sidai Khan								
N_32.63161-E.065.87994	0	19	50	Sidai Khan	33	low salary	have other	0	0	1487	1356	59
	0	17	51	Kootwal	5	low salary	have other	threats	0	631	571	44
	0		52	PED								

Figure 1. Part of Excel sheet used in the evaluation of education in Uruzgan

that fill them and the briefing slides — cannot grasp the supposed Afghan mystery of hidden meaning and non-literal messages. Instead, what is needed is serious investment in anthropological, imaginative inquiries. This contrast renders the Afghan more exotic, while Excel sheets and indicators become more unremarkable. What would happen, however, if we shifted our anthropological attention to the Excel sheets and let ourselves be riddled by their numbers?

Between 2010 and 2011 I worked as an evaluator trainee for an Afghan research organization. This Excel sheet (Figure 1) was the main tool for an evaluation study of education in the Southern Afghan province of Uruzgan. The Dutch embassy had commissioned this study as part of a larger evaluation of its military and developmental presence in the province between 2006 and 2010. It was going to be an important moment in the public communication of the intervention’s achievements to Dutch constituencies.

The number I trace is 6.15%, a percentage that offers information about the number of girls going to school in the province. It is supposed to reliably convey the fact of girl students’ attendance in Uruzgan, but, as this article will discuss, there is more to the process of numbering and the facts it produces. I could have taken any number, but this one was of special interest to the donor.

It was a crucial motivator for the intervention in Uruzgan, a place described by many Afghans and internationals as a place of extremes even in a country like Afghanistan, which is commonly associated with political excesses and material scarcity. Here are some conventional figures and faces that appear in the reports and works on Uruzgan (Beeres et al., 2012; Bergen & Tiedemann, 2013; Dam, 2014; The Liaison Office, 2010). Uruzgan is known as the “recreational” ground of the Taliban — a place where they rest and gather their strength before and after the spring offensives. It is both the birthplace of the Taliban’s former spiritual leader Mullah Omar, and the place from which former president Karzai rallied support to push the Taliban from Kandahar in 2001 and claim the presidency in Kabul. In addition to its putative historical importance, Uruzgan is viewed by many to be the most economically and educationally backward province in the country. Illiteracy numbers are widely reported as the highest in the country and are often correlated to Uruzgan’s high incidence rates of domestic violence. As it happens, Bibi Aisha, whose disfigured face featured on the cover of Time in 2010 and became the global icon of Afghanistan’s brutal treatment of women, is an Uruzgani native. According to international organizations, progress on the path towards democracy and stability is hampered by

tribal conflicts, opium production, and insurgency networks, all of which add layers of instability and violence to this province that is politically and socially quite distant from the national capital of Kabul. By most developmental indicators, Uruzgan was a place that urgently needed intervention and it was in 2006 that a joint Dutch and Australian task force took up NATO's assignment. The Dutch ended their military mission in Uruzgan in the summer of 2010.

The evaluation study commissioned by the Dutch was going to be done by the Uruzgan team, of which I was a member. The European woman who had co-founded our organization was also the supervisor of this evaluation project. She had translated the donor's interests and questions into questionnaires. As Uruzgan was heavily Taliban controlled, it was impossible for non-Uruzganis to collect answers to these questions. For this reason, local surveyors did the work. Our team subsequently flew to Uruzgan to debrief these surveyors and collect the paper forms that they had filled out in the local Pashtu language. Our Afghan project manager processed all the answers that specifically dealt with education by transferring the information from the paper forms to the Excel workbook of which the above image is a screenshot. In the process, he translated a diverse series of answers and figures to a more or less standardized format in English.

After entering all this data, we were left with a workbook that was grotesque in form and content: it was made up of several sheets with endless columns and rows, all sorts of color coding, empty or filled cells, and mixed Pashtu and English language and numerals. It stored a vast range of characteristics of schools and schooling: GPS coordinates, village location, educational level, information about schools being closed or open, types of subjects taught, number of teachers officially assigned to the school, number of teachers actually teaching permanently or temporarily, their gender, the number of teachers in the district that do not teach, why this was the case, the official student count, the number of children that occasionally or regularly attend school, their gender, the construction status of school buildings, the number of used and unused rooms for boys and girls, the presence of a boundary wall, latrines,

wells, hand pumps, kitchen facilities, textbooks, the quality of those facilities, type and amount of threats to teachers, students, or schools. These characteristics appeared on the horizontal axis, labeling the 98 columns that qualified the list of schools that appeared on the vertical axis, which in turn labeled the rows. Each separate spreadsheet of the workbook dealt with the schools of one district, and as Uruzgan has seven districts, the workbook contained seven spreadsheets.

My supervisor asked me to start with the analysis of the Excel sheet. In the days that followed I tried to decipher the Excel workbook and figure out how to analyze it and what order or trends I could discern from it. Thus far in my academic or professional career I had never learned how to use this software, understandably to the disappointment of my supervisor. As I couldn't tackle the database and still had to produce an overview of educational developments in Uruzgan, I decided to fall back on my anthropological training, put the quantitative aside and craft a qualitative narrative. I gave my supervisor what I thought was a careful analysis of educational trends and perceptions. This meant concretely that I gave an account of people's perceptions of education based on our interviews with the surveyors and other actors in Uruzgan. But this was not what my supervisor wanted. She wanted numbers.

Doing Numbers

Many scholars examine numbers and they do so in diverse contexts. Some have investigated the cultural variations of numeracy (Crump, 1990) or have examined a broader ideal of quantification and objectivity (Porter, 1995; Daston and Galison, 2007), on problems of referentiality and accuracy (Poovey, 1998; Mitchell, 2002; MacKenzie, 1999), and on statistics (Asad, 1994; Hacking, 1990). Others have investigated cultures of audit and accountability (Power, 1997; Strathern, 2000; Anders, 2015), the work of rankings (Sauder and Espeland, 2009), and indicators under the sign of governmentality (Merry, 2011; Davis et al., 2012; Rosga and Satterthwaite, 2009; Shore and Wright, 2015). What all this work has in common is that it argues against the illusion that the world can be

neutrally represented and accessed by measurement. This article joins those who claim the world is heterogeneous and multiple. I add that one of the key technologies used for representing this world – number – is itself a multiple, taking a sense of instability up to the power of two.

Across the board, the way numbers are handled in the above-mentioned literature, is as stable and passive communicators of the world around them. Number is largely seen as a political technology that reduces complexity to make visible otherwise obscured social trends. Numbering or measuring can then be critiqued for the fact that it comes to replace relations of trust and it can subsequently turn evaluations into technical questions of measurement rather than explicit political judgment. Or, numbering can be critiqued for its claim to neutrality while it is all along invested with the values and life worlds of the individuals who employ them. Even if measuring is understood as generative of a host of subjectivities, cultures, understandings of probability or objectivity, redistributions of responsibility, rituals of verification or new expertise, numbers are taken for granted as exemplifications of arguments or as effects of some diffuse magic and charisma. Even if the authors just mentioned would agree that numbers are diverse and have effects in the world, the way they might actually dynamically participate in the valuing and ordering of our worlds as actors with complex properties and potentials, is nonetheless seldom explored and addressed.

What if we instead open up what goes on within numbers and numbering practices? This article intends to do just that by exploring the active and performative power of numbering. It relies on the work of scholars that do not take numbers as coherent or passive, drawing on the extensive exploration of number as inventive frontier (Guyer et al., 2010), of number's liveliness and embodied relationality (Verran, 2001, 2012, 2013), and of numbers as compositions that we live with and in (Day et al., 2014). To analyze numbers as active and lively, I take four steps.

First, numbers actively participate in the ordering of our worlds. Consider this example of a number's capacity to interpellate (Verran, 2001). I give someone a piece of writing with the number 8 inside a red circle on it. The recipient smiles. In this moment the writing is numbered, but this

is not all. The handing over of the paper enacts the recipient as a student, me as a professor and the paper as a valued item that is transformative. In numbering practices people, technologies and objects participate in numbering and attune themselves to one another according to the numbering logic. Participation doesn't just happen through "knowing numbers" as valuing objects, but also through sensing who is part of the numbering context and through gesturing at new participants (Day et al., 2014). It is in this encounter that people and objects become related under the sign of number and that numbers come to matter.

Second, I use the concept of the interface as an analytic to ethnographically investigate the way numbers interact with their environment. To call what I do 'an ethnographic investigation' may raise the expectation that I do an ethnography of subjects, of people using numbers. Instead, I offer an ethnography of a number, as a technology, an entity, a tool, or an inscription. The interface is the analytic means by which I pursue the idea that numbers as entities have a form and a way of life that can be explored ethnographically, no less than the members of a group of humans can be said to have. Numbers' capacity to value and order the world – and this is no different with humans or other technologies – resides in its interface with others and other things.

Callon and Law's (2005) work on Cochoy's term *qualculation* is helpful to ethnographically grasp the moments in which numbers interface with their environments and transform. They argue that the notion of calculation is not an issue of quantification alone, but instead is a mix of quantification and qualification practices, calculation and judgment (Callon and Law, 2005). This practice of *qualculation* can be phased in three steps: the sorting out and detaching of items, manipulation of these items, and the extraction of a new entity. Each step towards quantification depends profoundly on qualitative judgment and draws in a host of specific skills, technologies and ambitions. While these steps offer an ethnographic orientation to the transitions involved in numbers' shifts between evoking uncertainty and certainty they shouldn't be read as a progressive series towards impassive abstraction. While Callon and Law helpfully point out what numbering

protocols might look like, they overlook number's particular contributions to it, reducing number to what people do with it.

Numbers have specific capacities, however, and these are activated in numbering encounters. This is the third analytical step that I take. Numbers have an internally complex multiplicity that is called upon in specific ways in particular situations. What kind of order numbers effect depends on the particular capacity that is animated in the encounter. Verran (2001, 2013, 2015) has proposed several epistemo-cultural properties of numbers. Numbers can, for example, orient towards the past or evoke futures. They can be representational truth claims or demand immediate action. Or they denote parts, wholes, quantities or series. These semiotic, temporal or generalizing modes that are called on in the encounter contribute to a particular organization of the elements of the encounter. Numbers that inspire immediate action will, for example, evoke a sentiment that propels us into the future rendering unthinkable questions about their accuracy or the way they have come together in calculations. The capacities of numbers that are animated in numbering practices therefore enable or disable particular choices, but also influence compatibilities with technologies, transportability, and affectivity. It is here where numbers make a difference, persuading towards certainty or inspiring doubt; enumerating environments beyond the referent; mobilizing certain people and resources rather than others; making particular worlds possible rather than others.

However – and this is the fourth step – this semiotic, temporal or generalizing multiplicity that makes up number still appears singular. Number's capacity to be singular and multiple at the same time depends on dynamic doings with hands, computers, papers and more. In these doings number emerges as singular while constantly being realized from a multiplicity of uncertain potentials. Number *is* the relation of tension, or, number *is* the interface, between singularity and multiplicity, between reference and iconicity, between specificity and generalizable extension, between agency and passiveness, between reality and analytical construct (see Verran, 2001). The notion of the interface in the way that I use it,

both attends to the ways in which numbers relate to, bring into being and know the world around them, and at the same time it expresses the oscillation between evoking certainty and uncertainty about the accuracy, relevance, or presence of what it is that number knows.

In what follows I will investigate the coming into being of 6.15% as it emerged in three numbering practices: the cleaning of data collected by the surveyors in Uruzgan, the analysis of this data in the Kabul headquarters, and the presentation of the evaluation data in the report. This paper does not argue that it is in this linear sequence of research steps that truth is revealed by number either as a reality of education or as a reality of uneven power relations embedded in evaluation research. In other words, this paper is not concerned with the politics of representation that numbers may exemplify, nor with the accuracy and adequacy of the research protocol through which it has come into being. Rather, it wants to unsettle the stability and passiveness that keeps number unremarkable in analyses of the world around us. The following three stories present three distinct and separate numbering practices through which numbers come to act with three distinct sorts of capacities: i) the capacity to effect reference, ii) the capacity to constitute proportional comparison in terms of a population, and iii) the capacity to evoke doubt and certainty. An analysis of these capacities shows the ways in which numbering establishes girls as research entities, as parts of a population, and as a concern for the Afghan government and the international intervention. It therefore enables an understanding of the specific ways numbers relate to, bring into being and know education as a phenomenon in contemporary Uruzgan, while never completely succeeding at stabilizing the accuracy or relevance of the order and value number claims.

Reference

The donors want to know about the education of girls. My task is to now transform the Excel sheet data that was effectively "speechless" into numbers that have a voice (Harper, 2000: 24). Within the Excel sheet I look for the numbers of

girls going to school. The column that logs these counts lists more zeros in certain districts than in others. This raises a few questions for me. One explanation could be that most schools are boys' schools, and for those it makes sense that the entry for girl students is a zero. Another explanation could be the fact that many of these schools are closed. However, upon closer inspection of the workbook, many closed schools still list the numbers of students, services or classes. How can we explain this? Maybe a school that was closed because of Taliban threats is still secretly offering classes? Or maybe a school that was closed because it was still under construction had started teaching in already finished classrooms? Maybe the student count listed was the amount of students that would have attended if the school were open or the amount that had attended in the past?

The numbers in the Excel sheet had traversed a significant distance along a chain of reference – from local informant, to surveyor, to our Afghan project manager who had entered the data in the Excel workbook, to me, the data analyst – and would eventually continue on to the Dutch embassy and associated government officials in The Hague. The occasions for misunderstanding along this chain were multiple. As the information upon which this evaluation was based emerged from a context of frequently violent local tensions, a significant degree of linguistic or educational differences, and a style of keeping records that is not quantified, how did this affect the reliability of the numbers? Maybe the local informant had not been up to date about the latest educational developments in his district, or maybe the surveyor had not found the right informants to speak to. Both of them might perhaps have preferred the social status of knowing, even if this implied pretending, over the scientific ethos of accuracy.

Then there was our Afghan project manager who had made certain decisions in the process of assembling and translating the Pashtu data in one workbook. One issue he had to deal with were the unanswered questions of the paper questionnaires and the subsequent empty cells in the Excel workbook. Excel cannot easily perform its calculations when cells are empty and so our project

manager had to fill them with data. It was not fully clear to what extent he had scrutinized the empty cells, investigated the value to be assigned to them, and entered the corresponding number, even if this meant a zero. He might have entered zeros in all the empty cells along the logic that the number zero corresponds most to the meaning of an empty cell. He could also have been meticulous about certain values that mattered to him and less concerned with respect to those that did not.

And then there was me. As a female Dutch PhD student in Anthropology, who was new to Afghanistan and hardly spoke Dari or Pashtu, what did I know? Being trained in critical theory made me cast doubt on anything claiming to be objective or factual. Furthermore, I had hardly any knowledge of or experience with evaluation research so on what did I base my assessment of the accuracy of the data? Did I have the cultural and linguistic sensitivity for an assessment like this? Were my misgivings even helpful? Or were my reservations preventing me from seeing the crux of the matter: that in order to establish the reliability of numbers, one needs to rely on the chain of reference and trust its transmissions?

The uncertainty with regards to the reference and accuracy of data is a familiar problem to many working with numbers and Excel. The specificities of the Afghan situation, with its problems of access due to security protocols and cultural and linguistic differences, makes this conundrum all the more visible. How to think about this uncertainty? How to reconcile that there may be nuances in the world that the surveyors have overlooked or nuances in the surveyors that have no references in the field (Latour, 2004; see also Lippert, 2018, with a sophisticated treatment of certainty/uncertainty in numbering practices)? In his article on soil sampling in the Amazon forest, Bruno Latour (1999) argues that the relation of reference does not naturally exist between word or number and thing but is established in a series of mediations ranging over the production process by which the reference, its accuracy and its transparency are produced. The Excel sheet is therefore not a mirror of what is happening out there in the educational field in Uruzgan: it requires a lot of work for the belief in its referencing capabilities to be possible.

How does the number interface with its environment here? Excel's technical requirements, as said before, require that evaluators make modifications in the numbers. Cells are filled, and language, both numerical and linguistic, is standardized. But there is other technology, too, that the numbers need to be compatible with. As the donors want our evaluation results presented on maps, Excel needs to work with cartographic software, and the GPS coordinates in the Excel workbook are the gateway into this Geographic Information System. In our case, however, once the coordinates and their educational attributes were entered into GIS some turned out to fall outside of the cartographic grid of Uruzgan into places as far off as Kazakhstan and Japan. These coordinates only verify themselves to a certain extent: if one of the first coordinates is off, the dot will end up outside of the boundaries of Uruzgan, but if one of the last coordinates is incorrectly copied from the device, the difference might only be a few hundred meters. A general check of all the coordinates was needed to ensure they would appear on the local map and, as such, count as part of the picture of Uruzgan's education.

Other adjustments were done in order to make our expectations from the field match the numbers in the Excel sheet. An example of this was a breakdown of the number of Uruzgani students. After an initial count, high school students outnumbered elementary students. This seemed highly unlikely for a place that international organizations knew for its steep illiteracy numbers and where parents relied on children as labor power. A check revealed that certain student counts had been entered twice, both for the school's main location and the school's annexes. Adjusting this did not correct the trend according to our expectations. In the final report, this mismatch was suggested as an error in the data collection and identified as a gap that called for further research.

In evaluation lingo number's interfacing with its environment is called data cleaning. It is a practice that calls on number's capacity to effect reference. It connects numbers to matter, through intermediary adjustments that follow the doubts that numbers raise either with regards to technological compatibility or to expectations of the

field. As this account of the cleaning of the Excel workbook shows, it requires a lot of work to have a number make sense. They are calibrated internally, cohering expectations, demands and requirements of a network of technical and material routines and people with different tasks and skills. The effect of this internal tinkering is number's reference to something external; a value that makes sense within a larger context. However, as others in different contexts have shown (Poovey, 1998; MacKenzie, 1999; Mitchell, 2002 in the fields of respectively early-modern accounting, nuclear missile testing, and colonial cartography) the connection between referent and sign comes to be seen as naturally and accurately so and all the work that has gone into the process of calibration is seen as part of the process of extracting the story of the numbers rather than as part of making that story.

Let me emphasize this point. Making the story involves the transition from numbers as part of the reality of data collection to numbers ready to participate in analysis. Consider the problem of "nothing" (see Neyland (2018) for a parallel issue). Dealing with empty cells, "nothing" is turned into a problem of "nothing" into an account of "nothing" (the sign zero) as the solution to the problem of nothing. In other words, "nothing" – which is everything that escapes attention and problematization – becomes "nothing" – a manifestation of a problem – and gets the appropriate inscription of "nothing," the sign zero, which doubles as both the indication of the problem and the solution (see also Rotman (1987) on zero's participation in two logics). The empty cell was ambivalent and incompatible with technology. Internal calibration enables the filling of the cell and as its effect, there is now a referent, albeit a negative one, in the world, ready for proportioning in the world.

Proportionality

In order to produce numbers that indicate something, I have to apply arithmetic formulas that are embedded in the Excel program to selections of data. The Excel handbook that I consulted made it seem like this was simple. In fact, the single mouse-click that would reveal the patterned and

ordered world hidden behind the numbers would save me so much time, according to *The IT Girl's Guide to Becoming an Excel Diva*, a pink handbook keen on pitching Excel's compatibility with the life of a socialite (Babaian, 2008).

The mouse click is indeed simple, but it is not so obvious which data to click on if I want to make the number of girl students reflect "educational achievements." How do I deal with the fact that many families value a girl's education but prefer her to be home-schooled? How do freshly built but unused girls' schools in a safe district play into the story of educational development in Uruzgan? Should we offer a number to show disparities among girl students across Uruzgani districts? This would reflect, for instance, that where Hazara minorities live in the largely Pashtun south, the numbers of girls going to school are higher – as they are much more inclined than other tribal groups to send their girls to school. It is very well possible to ignore and conceal this disparity by producing a number for the province as a whole. It is precisely such baselines, expectations and moral understandings of what education or development should look like, that determine the parts and wholes we use in the work of proportioning.

This is curious work, though we tend to take it for granted. Calculating our way through the data we end up with "6.15% of Uruzgani girls go to school". 6.15% is a way of expressing a ratio of 6.15 to 100, which in turn is a simplification of the ratio of two quantities found in the field. Here my analysis follows Helen Verran's (2013) who picks apart a percentage in a similar fashion. The quantity that the numerator 6.15 represents is a simplification of the number of girls counted in the field all added together. By itself this number indicates nothing without the help of another number, the denominator. This denominator is not simply another absolute number but a whole — the numerical equivalent of which is 100. What this denominator represents is the total number of school-aged girls in Uruzgan. While the numerator was derived from the total of the counting efforts of the surveyor, as we saw before, the denominator has a different origin. An exact number is unavailable: a precise population census is lacking.

Some educated guessing yields a quantity of Uruzgani school-aged girls. A population pyramid

of Afghanistan drawn up by another international organization estimates that 70% of the population is 18 years or younger. Health data for Afghanistan indicate that about 20% of all Afghans are under the age of 5. We take these numbers to hold for Uruzgan as well, which means that 50% of the Uruzganis can be considered of school age, of whom 50% must be girls (TLO, 2010: 20). This allows us to calculate a denominator of which the numerator becomes a part.

So, there are significant differences between the denominator and the numerator. They differ not only in terms of their graphics and their location above or below the fractal line, but also in terms of "the institutional and literary routines" (Verran, 2013) from which they emerge. The girls to whom the two numbers refer are different as well. The surveyors with their questionnaires and pencils who write down the counts that some school's headmaster or local education minister reports to them, know the numbers differently than I do: whereas I sit behind my computer, surfing for previous approximations by other organizations who may have been committed to knowing education differently themselves (on knowing education differently, see also Gorur, 2018). I use the estimates that I find to compute another number that by now no longer comes with traces of counting. Whereas I have been imbued with an authority of knowing and reading the numbers based on my educational background and my association with the internationals, the surveyor knows and reads numbers in his capacity as former employee of the Department of Education in Uruzgan. And whereas surveyors may have research protocols in mind (or food on the table or social prestige or all three) I have deadlines to mind, my own reputation within my professional environment, or the position of my research organization in a larger network of competition for assignments from donors (if the picture I am painting may seem stereotypical, I would like to stick with it for the sake of the argument). Moreover, whereas I construct an imagined quantity of girls as part of a population of students that are a development target, the surveyor might count girl students as a means to receive more valuable development, such as infrastructural projects, in return.

The individual-to-society scale is the master narrative of the 6.15%. This narrative determines how number interfaces with its environment, which parts to identify (girls going to school) and how these parts relate (arithmetically) to a larger whole (a population of school-aged girls). This interfacing between parts and wholes makes number well suited to do political work, calling to work its capacity to constitute a proportional relation between numbers identifying individuals and those identifying society. Following Guyer (2014), I'd argue that the stability of the percentage form is an achievement of form, turning the focus on the possibility of de-/increase of the proportion rather than on the constituents themselves or the mathematics of their relation. Moreover, with the mathematics of proportion the moral sense of due ratio and fairness slips in, further substantiating the individual-to-society relation, concepts such as the micro and the macro, and a version of the social that has become so well-established that it seems natural. In John Law's terms, it is a romantic version of the collective that imagines the whole as coherent and to be discovered "in a manner that is single, centered, explicit, homogeneous, and abstract" (Law, 2009: 249). Girls are stripped down to countable educational characteristics that can be aggregated to produce a whole in which these characteristics are proportionately distributed.

This is the business of statistics and its possibilities and limitations have been discussed by many (see for example Asad, 1994; Hacking, 1990). As Corsín Jiménez calls it, in a reflection on the measurement of well-being, a focus on the units eclipses the relations between and within them: "We come up with a number but lose track of the social; we end up focusing on the units that are aggregated and not on the mathematics of aggregation" (Corsín Jiménez, 2008: 182). Yet, while certain complexities and nuances of society disappear behind the fiction of its measurement, another kind of society emerges in these practices, and this enactment swiftly shifts between the way society has been made compatible with spread sheet practices to a project with value for the future, an invitation to further investment. I will address this in the next section.

The different trajectories of the numerator and denominator discussed above point to the politics of the number. There are other scales and relations between parts and wholes at work in the name of Uruzgan's education: girl students as part of a girl student population, student populations as part of professional ambitions, food on the table as part of girl students, deadlines as part of student populations. Computing and aggregating these parts and wholes differently, might, in turn, yield different and more poetic versions of the social (see Ballesterro (2014) for an appreciation of percentage's capacity to expand meaning that exceeds mechanical or informational purposes). If anything, they complicate thinking about scales as the relation between parts and wholes, not along an imagined vertical axis from small and simplified individuals to big and complex societies, but along different logics of connection and distribution.

Evoking certainty and doubt

So now we've arrived at the 6.15%. A few certainties have crystallized (see also Lippert, 2018): we have established that there are girl students who go to school, who can be counted and taken as a proportion of society and which can be represented in a percentage. The 6.15% refers to a number of girls going to school in relation to a population of school-aged girls. We still don't know, however, how to think about this number: whether it is an achievement or a disappointment. To better know the value of the number, we need to compare the 6.15% to an external standard.

In the final report – *The Dutch engagement in Uruzgan: 2006–2010* – 6.15% makes its first appearance in the well and often only read executive summary at the beginning of the report. Here the percentage is singled out as important and is only listed among three other important educational figures related to the construction of buildings, operational status and location of instruction. Given the vast number of indicators and other figures that the analysis of the educational data yielded, the fact that 6.15% made it into the ex-sum means something:

In Uruzgan province it is estimated that 20% of all school-aged children attend school, a figure which is significantly lower than the national average of 50%. The percentage of girls enrolled in Uruzgan's schools is even lower and estimated at about 6.15%. (TLO, 2010: vii)

Now we know that the 6.15% is actually "significantly" low. This is not in comparison to a temporal baseline: 6.15% could very well appear as an improvement against percentages of girls going to school in Uruzgan in previous years. It is, instead and probably unnoticed by many, a comparison of a provincial percentage against the national percentage. This liberal interfacing of 6.15% with the comparative context of the national percentage rather than with change over time might be an epistemic failure in evaluative terms, yet it isn't about epistemic accuracy here anymore.

The number performs differently once it is up for presentation. For one, it propels us into the future (see Verran, 2012). Whereas the numerator in the previous section reports a past reality of counting and registration without any value beyond that, its subsequent contrast to the denominator and the national percentage turns the 6.15% into an "iconic" number: value and category have become the same and the referential accuracy is not at stake anymore. Even while its accuracy is admittedly flawed, we evaluators think it is accurate enough and should be published in order to make a particular case. The number is no longer a re-presentation, but evokes an order of things, a world where education is an aspiration, maybe even an obligation for the citizens of a democratic state. These citizens are to be equal: girls should not be discriminated against and have as much right and opportunity to go to school as boys, to educate themselves and grow into adolescents with perspective and opportunities. But the 6.15% does more than call up this world. It also mobilizes for wholeness and fullness, and inspires to aim for the 100%. Hence, it is no longer a registration of girl students but has become a number ready to be employed in the business of articulating futures and generating policy. 6.15% could justify Dutch taxpayers' money spent on education, and ongoing investment in Uruzgan against the grain of the Dutch public's rising skepticism regarding their involvement in international development.

I could end my account of the life of the 6.15% here. I would have shown how data presentation calls on number's capacity to imagine a world and inspire action towards it. I would have framed the transformation of the numbers from the Excel sheet to the report as one from weak numbers to hard facts. The 6.15%, however, appears once more in the body of the report. And this time the percentage does not evoke quite the same sentiment.

The "Achievements in Education" section (TLO, 2010: 16-22) starts with an acknowledgment of the limitations of the data collected before 2010, complicating "an accurate comparison" with the data collected in 2010. After this, the reader is pulled through a maelstrom of numbers: there is text with numbers of school buildings broken up per district, per gender of students, and per operational status. Then the number of school buildings is once again broken down, this time in bullet-point style, per category of educational level. Then there is a new breakdown in table format: within the first column is a comparison of 2006 and 2010 figures; in the second column are arrows, blue and up for progress, green and sideways for stagnation; in the third column is another detailed breakdown of those school buildings that were added since 2006 (where what was already present and what is new is unclear); and in the last column are percentages and absolute numbers of school facilities that are not official school buildings, broken down per district and type of facility. Then follows a narrative in which another variable is introduced — that of ethnic or tribal demography — one which is suggested to bear relation to the distribution of schools. Along with this is some information about the work of NGOs still going on, narrative text on student enrolment in absolute numbers (broken down per regular and occasional attendance and per educational level), girl attendance mentioned in brackets, a table with absolute numbers of children going to school regularly and occasionally, and then, there it is, the 6.15% measured against the national and provincial average of school attendance, and broken down per district.

I will not take you through similarly complicated sections in which more student and teacher figures are broken down. The issue is not to point

to the evaluators' bad writing. To the contrary. The report is carefully put together and as writers we made sure to include all the trends we discovered and all imaginable explanations. What I want to point to is the shift between numbers as value, as development trend and numbers as valueless registrations that can be mobilized to represent a developmental trend. These two versions of the number can both jeopardize and strengthen each other's claims. Let me explain.

In my contributions to the writing of the report, I constantly felt compelled to condense the text. Rather than adding more possible numerical distributions of characteristics of Uruzgan's state of education, I wanted to reduce the amount. I thought less numbers would yield more power to our claims. Instead more numbers would reveal how easy they (along with figures and percentages) can be made and would ultimately take away from what numbers told us. This seemed to me exactly what the body of the report did. The different contrasts, ways of breaking down, partial explanations, disclaimers and explicit mention of the absence of reliable numbers only emphasized that there are ever so many alternative ways of proportioning, possible standards or benchmarks, explanations, and ways of relying on numbers.

It may seem as if the last appearance of the 6.15% in the body of the report, brings the number full circle, throwing it back into the chaos of randomness. And it may seem as if the confidence that the 6.15% exudes in the executive summary is blown away by the numerical whirlwind later on in the body of the report. But while in other genres an exposé like this would raise eyebrows and provoke questions of relevance, accuracy, or style, this whirlwind does not evoke uncertainty and doubt for my fellow evaluators or the donors. What looks like a collection of data without a vision, is in fact a logic of filling in, completion and completeness, of summing up (cf Riles, 2000). This desire for always more data trumps a logic of building arguments where data is processed into words, sentences, paragraphs, arguments altogether. In the body of the report, one plus one is not the new figure of two; one plus one is instead a plurality of ones. The more units of one we can add to the story, the more solid it becomes. So, rather than jeopardizing the claims

of the executive summary, the logic of summing up numbers and claims about numbers grounds these claims. Number interfaces here with readers. Depending on these readers, the number can be the order and value it claims and inspire towards action accordingly or the number can evoke unmoored chaos and inspire distrust and disconnection.

Conclusion

In this article, I have told three stories of numbers between counting and accounting. In these stories numbers actively engaged with their environments—their social, cultural and political milieu—with differing effects. Let me revisit here numbers' agency, their ways of interfacing and capacities for order and value, along with the effects of these encounters.

Numbers are active participants in the ordering and valuing of our worlds in different ways. Most importantly, numbers can inspire doubt as to what something means, demand action for clarification and, subsequently, exude confidence. Moreover, numbers indicate the numbering practitioner, their audience and their referent. They can raise questions about the quality of these relations: is a number accurate, does it relate to the right audience, and is the practitioner trustworthy? Numbers can also enable or disable the working of software or question expectations about Afghanistan. And they can evoke worlds, orient towards the future, or bring the past to mind.

How do numbers interface with their environment in this case? They are embedded in a methodological protocol that stipulates a sequence of actions to be applied to them. This protocol dictates that the number travels from paper questionnaires to an Excel workbook, from data cleaning to analysis, and from analysis to publication in a report. This sequence requires the number to interface with a host of technologies such as Excel and GPS. In addition, they interface with a mathematic of the social and with the expectations of what reality looks like in Afghanistan. Numbers interface with text, from Pashtu to English, according to a logic of composition that is particular to executive summaries and evaluation writing. But numbers also interface with readers.

In each of these moments in the numbering interfaces described in this article there is an initial uncertainty as to what the numbers mean. What do all the zeros in the Excel sheet mean? Which numbers are supposed to make up the parts and the wholes of the proportions? Is 6.15% a sign of the success of the Dutch intervention? These uncertainties require responses and set in motion a series of actions, of manipulations of sorts, to resolve the questions the numbers raise.

In the process of interfacing one of number's many capacities is activated. Number's referential capacity enables it to evoke Uruzgan's state of education as a reality that is out there, available for measuring. In another instance numbers' capacity for proportional comparison enables numbers to participate in a mathematics of the social and to generalize in terms of populations. Or, numbers orient to the past of their coming into being or inspire to action for their cause. Importantly, numbers are caught in an oscillation between evoking referential doubt and evoking confidence or action (until they don't anymore and someone or something throws the numbers back into a pool of questions and uncertainty, demanding clarification, and so on). Rather than weakening the power of numbers, it is in this contradictory oscillation, *as* interface, that numbers are generative.

What are numbers generative of in this case, then? They participate in the making of Uruzgan's education. They make possible an understanding of Uruzgan's education as one that is known through numbers. Uruzgan's education is what can be quantified and listed in Excel sheets. Its contours emerge in the list of characteristics of schools and schooling. Its trends and tendencies are revealed through the application of mathematical formulas. And encouragements for social change gain power when they appear in the form of indicators and percentages. These are matters

of governance, in the sense that numbers and numbering practices make entities, contexts, mobilize sentiments and suggest action. As this article has shown: numbers help to transform "nothing" (a potential without attention) into girls as a data category, into girls as a group of individuals that are part of population, with a particular distribution of characteristics, into an urgent concern for the international community.

My analysis foregrounds numbers as relational entities, that numbers have the capacity to do things and that what numbers do is situated. The notion of the interface helped me to bring out number's relationality. Yet, the interface isn't an external affair only. It isn't about what number can do and effect through its relations. The interface *is* the number, as an oscillation between doubt and certainty, towards stability and chaos.

Evaluation may easily be understood as a difference between a before and after picture. New figures are contrasted with baseline numbers and the difference is to be explained by the logic of development. If we stop thinking about numbers as symbolic communicators of the world but start seeing them as entities with specific capacities for generalization, for guiding our attention towards the past or action in the future, for oscillating between representing and being value and order, the analytical functions of numbers change. Numbering, in its wake of evaluation, has manifested itself as a contradictory coproduction between people, inscriptions, technologies and more, always trying to push to the background the traces of this co-constitution as these traces are deemed irrelevant. Bringing the practice of numbering and the capacities of numbers to the fore provides an opportunity to not only critically assess them as end products but to carefully assess the worlds that emerge alongside numbering practices and the ways that processes of governance work with and through numbers.

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