

The material practices of quantification: Measuring ‘deprivation’ in the Amsterdam Neighbourhood Policy

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Abstract

The use of indicators and indexes in social policy, as part of evidence-based policy, is understood by governmentality scholars as ‘techniques of governance’. However, we know very little about how the process of quantification is enacted in the material practices that constitute social policy itself. In this article we focus on a particular quantified object: the ‘Normal Amsterdam Level’ (NAP), used in an Amsterdam Neighbourhood Policy programme. We follow the NAP from its birth, to its life and its afterlife. We show that the *qualification* ‘deprived’ calls forth a whole set of problematic arrangements which are lost in a process of *quantification*. We understand the NAP as a generative device that actively assembles and arranges the world. These assemblages are rendered ‘hard’ through *semiotic*, *statistical* and *visual* techniques that produce facts about targeted neighbourhoods in relation to a city-wide average, thus serving as evidence and legitimisation for policy interventions.

Key words

actor-network theory, evaluation, governmentality, quantification, social policy

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Introduction

Since the 1960s, social policy has become increasingly evidence-based (Gray and McDonald, 2006). This has meant an increase in the use and development of social scientific tools in policy making, implementation and evaluation (see Cartwright et al., 2010; Young et al., 2002 on 'evidence' and the relation between research and policy). Most prominently, there has been a rise in the use of indicators and indexes in which information is quantified (Neylan, 2008). Noordegraaf and Abma (2003) have for instance observed a trend towards 'management by measurement' in policy in which:

measurement methods such as performance rankings, monitoring, cost–benefit ratios, risk assessments, benchmarking, quality measurement, and score cards, and their results are used to get a grip on – to control and manage [...] highly ambiguous social phenomena like well-being, social cohesion, crime and safety. (Noordegraaf, 2008: 222)

These quantified tools fit particularly well with the linear, relatively unproblematic relation between science and policy that is at the heart of evidence-based policy (Valentine, 2009); quantified tools provide information that is, because of its quantified nature, perceived as more objective (Porter, 1992), transparent and truthful (Drucker and Gumpert, 2007). As scholars have shown, there is a great trust in numbers in Western societies (Hacking, 1990; Porter, 1996) and quantification makes systematic comparison and ranking possible (Espeland and Stevens, 2008; De Rijcke et al., 2016). As such, it is not strange that quantified information is favoured as evidence for policy development.

Research on indexes and indicators, often from a governmentality perspective, is critical of this development. This research has shown that the use of indexes and indicators can be understood as 'techniques of governance' (Burrows, 2012), enabling governments to govern from a distance. Governmentality studies deal specifically with how authorities conceive of and act on populations and territories and they teach us that two key practices are required to turn a will to govern into an explicit policy programme (Rose, 1999; cf. Foucault, 1991). The first is 'problematization', or identifying something as an issue requiring attention. The second is the process of 'rendering technical' (Li, 2007), or a set of practices to translate an issue into a legible field for governance by assembling information and local knowledge. In both problematization and rendering technical, quantification plays an essential role. As Rose (1999: 221) argues:

'To problematise drunkenness, idleness or insanity requires it to be counted. Reciprocally, what is counted [...] is what is problematised. To count a problem is to define it and make it amenable to government'.

Regarding governmental intervention in neighbourhoods, Uitermark (2014: 1428) has shown how any central authority that aims to govern in a large number of different localities develops indicators, indexes or other measurement methods to standardise and 'cod[e] the unique combination of circumstances in various localities' in order to monitor and render neighbourhoods legible for policy intervention.

In their critique, governmentality-inspired scholars argue that numbers have achieved political power within techniques of governance. The choice of quantified tools is a political rather than a technical process as through the selection of one indicator over the other, a certain element (for example, percentage of social housing) is objectified and becomes part of the social problem it aims to signal. This is most problematic when it involves the categorisation of residents, for instance, the ethnic background of people in indexes that measure 'liveability' (see Uitermark, 2005; Noordegraaf, 2008).

Rendering technical often occurs through the development of indexes, indicators or other quantified tools but we know very little about how this process of quantification is enacted in the material practices that constitute social policy. This is a critical gap in the governmentality literature, as critical policy scholars have shown that the workings of social policy cannot be understood without a detailed analysis of the practices that constitute them (see Yanow, 1996 on the 'practical turn' in interpretive policy analysis). McKee (2009) argues that if we wish to apply a governmentality perspective to more policy orientated settings we need to render visible and unfold concrete material practices. More recently, within critical policy studies new approaches to studying policy have emphasised the fluid and dynamic nature of policy where that which is produced is constantly transformed, distorted and modified in *practice* (Freeman, 2009; Lendvai and Stubbs, 2009). As Clarke et al. (2015: 44) argue:

This means being attentive to the ways in which policies – as they move – may imagine and inscribe positions, hierarchies, relations of domination and subordination, and forms of power and authority. Policies do so even – or perhaps especially – when they come to speak in neutral, technical or administrative vocabularies.

Following this line of reasoning, we argue that it is important to notice and unpack the quantified tools that constitute policies by describing how they are made and used in policy. We aim to ground the practical approach in critical policy studies more firmly in the materiality of policy making by adopting the concept of 'device' (Law and Ruppert, 2013) from Science and Technology Studies (STS).

The role of devices in the development of scientific facts or evidence has received a large amount of attention in STS. In their study on laboratory work, Latour and Woolgar (1979) show how scientific facts are produced in a

complex interaction of human and non-human actors and show the importance of all kinds of tools in such processes. However, these are not only highly technical lasers or microscopes but also more mundane artefacts such as paper, formulas and graphs, cabinets and rope (see also Latour, 1999).

Analytically, the devices Latour describes have a similar position for the scientist as the index has for the policy maker. In both cases, knowledge develops through these devices. We understand 'devices' as things that 'assemble and arrange the world in a specific social and material pattern' (Law and Ruppert, 2013: 230). In this way the concept of device makes us focus on the practical, the material and the performative nature of policy practices. Ruppert (2011), for instance, shows how 'population' as an object can only come into being through the work of devices such as the census (see also Hacking, 1990 on the relation between state formation and statistics). Annemarie Mol (2000) makes a similar claim regarding the performative nature of devices, when she analyses the practices in which blood sugar measurement machines are used. Mol writes:

A diagnostic technique never merely registers facts. It intervenes in the situations in which it is put to use. [...] By producing ever more facts, home used diagnostic devices may draw all the attention of professionals and even patients towards 'the numbers.' Thus it shifts away from feelings – in the physical as well as the emotional sense of the term. (Mol, 2000: 19–20)

The blood sugar measurement machine re-enacts the relationship between the patient and her body but also between the patient and the doctor. It is through the device that these actors engage with the patient's body. We argue that this work of re-enacting relations is also done in social policy through devices such as indexes and policy documents (Hunter, 2008; Freeman and Maybin, 2011; Law, 2002).

In this article we focus on a particular quantified object: the 'Normal Amsterdam Level' (NAP), an index used in the Amsterdam Neighbourhood Policy. We follow the NAP from its birth (its calculation) to its life (its use in policy reports and professional acts) and its afterlife (its effects). We argue that the NAP is a generative device that actively arranges the world in specific ways. These assemblages are rendered 'hard' through *semiotic*, *statistical* and *visual* techniques that produce facts about targeted neighbourhoods in relation to a city-wide average, thus serving as evidence and legitimation for policy interventions. In Latour's terms, the NAP becomes an 'immutable mobile', an object (think of a map or a number) that can travel from one site to another while retaining its shape (Latour, 1986). The index can be taken from one context to another while still creating facts about the neighbourhoods that are included in it. In our case it is taken both upwards (to policy planners and politicians) and downwards (to citizens and policy practitioners)

in the field). The NAP is then appropriated by these actors as a tool to make neighbourhoods legible.

This approach enables us to unpack 'deprivation' as a normative discourse in a manner that prioritises the agency of the NAP in a critical way. We describe how the NAP is designed and deployed at various levels of the policy process. We show that the *qualification* 'deprived' calls forth a whole set of problematic arrangements that are usually lost and obscured in a process of *quantification*. The notion of 'deprivation' can be questioned and critiqued if we, as critical policy scholars, are able to unpack the arrangements and relations out of which it consists. We show that the NAP performs a pivotal role in translating realities and problems in Amsterdam neighbourhoods into a code that is mobile. Long after the official Amsterdam Neighbourhood Policy programme has ended, the NAP is still able to inscribe positions, hierarchies and forms of power and authority which direct the management of 'deprived' Amsterdam neighbourhoods.

Data and methods

This article grew out of the experience of one of its authors in conducting ethnographic research on the implementation of a Dutch nationwide Neighbourhood Renewal Policy in Geuzenveld-Slotermeer, an urban district in Amsterdam (see De Wilde, 2015).¹ In this project, she came across a massive flow of national, local and sub-local policy documents, outcome monitors and evaluation reports containing all kinds of numbers, used to visualise and monitor the 'state' of neighbourhoods and to evaluate the success of specific policy programmes. To gain insight into the use of numbers in policy, we collected all available policy documents on the implementation and evaluation of the Amsterdam Neighbourhood Policy (*Wijkaanpak Amsterdam*) over the period 2007–2012. For the district of Geuzenveld-Slotermeer, later New-West, we collected all available documents concerning the Amsterdam Neighbourhood Policy and other urban renewal policies for a longer period, from 2007 to 2014. In all these documents (17 in total) we collected the moments in which the NAP was mentioned and this served as our body of data for the analysis of what constitutes the NAP.

We also conducted two interviews: with a researcher at the research and statistics department (O+S) of the Municipality of Amsterdam involved in the evaluation of the Amsterdam Neighbourhood Policy; and with a programme manager at the Project Management Bureau (PMB), a local administrative office installed to tackle complex urban issues. As a 'strategic adviser', our informant at PMB had been responsible for the development and implementation of the Amsterdam Neighbourhood Policy. These interviews fur-

ther inform our understanding of the development and implementation of the NAP and inform the vignettes discussed in the second part of this article. This article is first and foremost an explorative case study of a particular index in which the empirical material serves to highlight the importance of understanding indexes as part and parcel of policy practices.

Designing a device

The NAP as an evaluation device

The nationwide Neighbourhood Renewal Policy was launched by the central government in 2007 to transform 'problematic neighbourhoods' (*probleemwijken*) into 'powerful neighbourhoods' (*krachtwijken*). It came on top of existing local and social policies in urban neighbourhoods where the latter were deemed insufficient, and went hand in hand with a rescaling of responsibilities and greater cooperation between national and local governments as well as between government and semi-government agencies. One of its offshoots was the Amsterdam Neighbourhood Policy of 2007, in which the municipality of Amsterdam and central government agreed on policy interventions and expected results.

Neighbourhoods were selected for the nationwide Neighbourhood Renewal Policy by the Ministry of Housing, Spatial Planning and the Environment (VROM).² After VROM had selected neighbourhoods for the nationwide Neighbourhood Renewal Policy, a local device was developed by the municipality of Amsterdam to evaluate policy interventions in the Amsterdam Neighbourhood Policy. This device, called the NAP, was designed by the Amsterdam research and statistics department (O+S) and by a municipal office called the Project Management Bureau (PMB). The NAP identified five 'priority' domains for policy intervention, to bring the neighbourhoods to the Amsterdam average: 'learning and growing up', 'integration and participation', 'working and the economy', 'housing and living' and 'safety'. Neighbourhoods that performed 'structurally' below average on the NAP were qualified as deprived. How this is measured is explained below.

The five priority domains are each measured through two indicators. For instance, 'integration and participation' is composed of the percentage of young people living below the poverty line and the 'grade for social cohesion', which is a re-coding of the answers to four questions on social cohesion annually posed to residents. Similarly, 'housing and living' is measured by two indicators: the percentage of people living in rental social housing and the 'grade for one's own neighbourhood', measured by literally asking residents how they would grade their own neighbourhood. In total, there are ten indicators for five priority domains (Table 1).

Table 1. Description of NAP indicators.

Learning and growing up	Average CITO score of the neighbourhood Percentage of young people (<23) with only a 'basic qualification'
Integration and participation	Number for social cohesion Percentage of young people growing up in poverty
Working and the economy	Percentage of unemployed population seeking employment Percentage of employed residents (working more than 12 hours a week)
Housing and living	Percentage of social housing units in the neighbourhood Mark (1–10) that residents give their own neighbourhood
Safety	Objective safety index Subjective safety index

Source: Bicknese and Slot, 2010.

These ten indicators, picked by policy makers in consultation with O+S, could only be loosely related to the planned policy interventions. Our informant from O+S explains:

It was a very conscious choice not to formulate these aims very precisely, like: 'we want it to go up by two-tenths or something like that.' Rather they formulated it like: 'we want better and more', just to give a sense of direction towards where they would like it to go. And well, at first instance, there are like 500 projects hanging under each of those domains and they have to lead to all those final aims, and those final aims, those overarching aims they flow back into the NAP. [...] So, they decided to choose two indicators per domain, per aim and to monitor those. So, the NAP is a core indicator providing an indication for what those 500 projects do together. (Researcher O+S)

There is no immediate or necessary relationship between the NAP indicators and the neighbourhoods, let alone that these indicators measure 'deprivation' on their own. This relation, or network, needs to be assembled actively. In the policy documents this assembling is done by enacting the NAP through different techniques: semiotically, statistically and visually.

First, *semiotically*, it is made clear in the early policy documents that the NAP indicates a 'basic quality level' that all neighbourhoods should attain. Here, we locate a shift from the NAP as a measure of the city-wide average

to the NAP as the lowest acceptable level. This is accomplished by viewing everything up to 1 standard deviation (SD) below the average as 'within the NAP', as will be explained below. The policy document that marks the beginning of the Amsterdam Neighbourhood Policy states:

The starting point for the Amsterdam Neighbourhood Policy is that all neighbourhoods in Amsterdam have to be on a certain basic level of quality for the areas of liveability, safety, housing, facilities and living environment. This basic level of quality is necessary to help a neighbourhood upwards. O+S measures the levels of these areas using a set of indicators. These indicators together determine the 'Amsterdams Peil', an average to which all neighbourhoods would ideally comply. These neighbourhoods of the Amsterdam Neighbourhood Policy structurally perform, in more than one area, under the Amsterdam Level (NAP). (Gemeente Amsterdam, 2007: 7)

The NAP thus indicates a basic level towards which neighbourhoods must strive, one 'necessary to help a neighbourhood upwards'. The Amsterdam Neighbourhood Policy targets neighbourhoods that perform structurally below this basic level. The preamble to the charter of the Amsterdam Neighbourhood Policy, a contract in which all partners including city district administrations, housing corporations and welfare organisations commit themselves, includes the statement in Figure 1. The quote reveals the centrality of the NAP in the Amsterdam Neighbourhood Policy. The NAP is simultaneously conceptualised as a tool to determine whether a neighbourhood is doing well and as a 'level' to be attained.

Met de ondertekening van dit charter leggen wij, ondertekenaars namens rijk en gemeente, de volgende gezamenlijke missie vast voor de Amsterdamse Wijkaanpak:

Alle buurten halen straks het 'Normaal Amsterdams Peil' (NAP), de gemiddelde waarden in de stad op de thema's van de wijkaanpak.

Figure 1. Because of its specific layout, we present this quote as a figure.

Translation: 'With the signature of this charter we, the signatories on behalf of the national and local government, declare the next joint mission for the Amsterdam Neighbourhood Policy: [Continues in blue] All neighbourhoods will soon reach the "Normal Amsterdam Level" (NAP), the average values in the city for the themes of the Amsterdam Neighbourhood Policy'.

Source: Gemeente Amsterdam, 2008.

The texts in these policy documents thus bring the neighbourhoods and social problems into the NAP. The NAP first works as evidence to tell us

whether a neighbourhood is underperforming. Second, it works to legitimise policy interventions; if a neighbourhood scores well below average, this, it is argued, is dangerous. Third, the NAP sets the goal and is itself the evaluative device to determine whether the goal is reached. To return to Law and Ruppert (2013), the NAP as a device assembles these different entities in specific ways, stabilising their relations.

Secondly, this assembling not only is done semiotically but is also enacted *statistically*. To do so, data is collected for all neighbourhoods in Amsterdam, and it is assumed that scores are normally distributed. O+S calculates the average and the standard deviations (SDs) by eliminating outliers – usually neighbourhoods where the population of what is measured is deemed to be too small. As our informant at O+S explains:

If a neighbourhood does not deviate more than one standard deviation from the average then it is within the NAP level. We calculated the NAP by considering all neighbourhoods in Amsterdam, we put all 78 neighbourhoods in a row. We take the standard deviation of those neighbourhoods and that standard deviation we contrast with the city-wide average score. (Researcher O+S)

The SDs are used to rank neighbourhoods by the degree to which they diverge from the city-wide average. Neighbourhoods are qualified as being average if they score within 1 SD of the mean, while scoring below 1 or 2 SDs is deemed problematic. Policy administrators and O+S researchers, however, do not take into account whether standard deviations are large or small. For example, the ‘grade for social cohesion’ had a standard deviation of 0.5 in 2010. This means that statistically 95% of neighbourhoods should score between 1.0 below and 1.0 above the average (which is 5.6). Looking at the actual scores, 13 neighbourhoods have a score below 1 SD (5.1 or lower) and none lower than 4.7. So the small group of neighbourhoods that falls outside of 2 SD (statistically this would be 2.5%) does not exist. The question of what it means to score 0.5 lower than the mean is not asked. Instead the focus is on whether the scores fall outside of 1 or 2 times the SD. This statistical procedure conflicts with the goal that ‘all neighbourhoods will attain the NAP’ (quoted in Figure 1). It is impossible for all neighbourhoods to fall within 1 SD, and as such be ‘average’. If the scores were to come closer together, the SD would simply change because the NAP is a dynamic rather than a static index.

As the relations between the NAP indicators and the social problems that culminate in a ‘state of deprivation’ cannot be isolated, causal relationships cannot be determined. If a neighbourhood scores below average on many of these indicators, it does not mean that it is a deprived neighbourhood. Our respondent at O+S argued that for her it merely indicates that social problems can be expected. It is a correlation rather than a causal link:

It is an attempt to try and say something on the basis of hard numbers, without having to go to those neighbourhoods and ask specifically about those problems. So, that on the basis of statistics you could get a sense of in which neighbourhoods you can expect social problems. Without stating that those social problems are actually there. To see if a neighbourhood has a red score more often, in comparison with other neighbourhoods. (Researcher O+S)

Thirdly, the correlation between indicators and social problems is insufficient to declare a neighbourhood deprived. Our respondent claims individual indicators are problematic because some are too static (social housing, unemployment) while others have a natural variance (primary school exam scores). However, the indicators do correlate, giving an overall visual representation of where deprivation is then assumed to be located. Evidence that a neighbourhood is in 'a state of deprivation' is thus created *visually* rather than statistically. As our respondent explains above, a neighbourhood can be 'red', referring to the colour coding of tables with scores based on the SD of indicators. The pallet of colours – or 'traffic light reporting' – creates evidence visually, as can be seen in Figures 2 and 3. The O+S researcher explains:

[Interviewer] Some standard deviations are wide, some are not. Does that mean anything?

[Respondent] Well, the idea is that if you take them all together you can see very well which neighbourhoods are in the green or in the red. After all, everything correlates very strongly with each other, so it has a practical use. [...] Indeed it helps to formulate a question like: 'gosh, *overall*, are we dealing with a bad or good neighbourhood here?' And then you hope, but you can hardly stop that, that people won't formulate a goal like 'we want that neighbourhood to get that score again so that it will become green again'. We don't do that. It is more that we try to sensitise, where do you see a lot of red or orange together in Amsterdam and where you do not see it. That's how we would like to use it ourselves. (Researcher O+S)

Here, our respondent moves to this third technique of relating, the visual. She argues that it is possible to visualise problems through statistics in tables such as the one presented in Figure 2.

In Figure 2, the relation between the neighbourhoods is enacted: the neighbourhoods are presented on the left, the indicators that suggest social problems are on the horizontal line above, and their scores are presented in the table. The colour coding, using blue rather than red for scoring below 1 or 2 SDs, offers a visual representation of 'the state of deprivation'. The single

Normaal Amsterdams Peil, juli 2010										
	Leren en opgroeien		Integratie en participatie		Werken en economie		Wonen en leven		Veiligheid	
	Citoscoring (2010)	% met start kwalificatie (juli 2009)	rapportcijfer sociale cohesie (2009)	% minima jongeren (2008)	% NWW 1-1-2010	banen per 1.000 inwoners 1-1-2010	% sociale huur (2010)	rapportcijfer eigen buurt (2009)	objectief (2009)	subjectief (2009)
Oost										
Transvaalbuurt	530,7	62	5,2	43	10,5	101	68	6,5	89	101
Indische Buurt West	536,8	59	5,3	40	10,7	166	64	7,0	90	104
Indische Buurt Oost	536,3	55	4,9	41	11,4	140	75	6,5	80	108
West binnen de ring										
Landlust	535,1	58	5,2	39	10,1	198	53	6,6	85	77
Erasmuspark	535,2	65	5,0	33	7,5	141	21	6,9	96	99
De Krommert:	537,6	69	5,2	31	6,9	170	32	6,9	68	87
-Chassébuurt			5,0		5,7			7,1	84	83
-Geuzenbuurt			5,4		8,4			6,7	53	92
Van Galenbuurt		60	5,4	38	9,4	269	52	6,7	85	85
Hooftweg e.o.	529,9	57	4,9	37	10,4	174	44	6,8	94	104
West buiten de ring										
De Kolenkit	533,2	54	5,4	47	14,5	122	83	6,1	69	90
Slotermeer-Noordoost	533,9	50	5,2	38	12,3	153	70	6,3	92	90
Slotermeer-Zuidwest	534,4	51	4,8	38	12,1	175	72	6,5	98	114
Geuzenveld	536,4	50	5,4	34	11,9	123	75	6,2	71	97
Osdorp-Oost	539,6	62	5,3	32	8,5	285	65	7,0	84	106
Osdorp-Midden	535,8	48	5,0	38	10,0	120	65	6,2	84	103
Overtomse Veld	536,2	60	4,9	47	10,6	606	57	5,6	86	114
Slotervaart	534,3	53	5,3	34	8,9	508	60	6,7	74	97
Noord										
Volewijk	533,9	48	5,6	39	10,9	191	89	6,4	102	85
IJplein/Vogelbuurt	532,3	50	5,4	46	11,2	141	81	6,3	87	79
Nieuwendam-Noord	534,4	45	5,2	44	11,2	150	73	6,5	71	104
Banne Buiksloot	536,0	45	5,3	37	9,8	186	76	6,8	56	83
Zuidoost										
Bijlmer Oost (E,G,K)	532,8	48	5,3	37	10,6	127	64	6,8	94	107
Gemiddelde AW 2010	534,4	54,7	5,2	39	10,4	201	64	6,5	84	97
Amsterdam 2010	537,3	63	5,6	28	7,5	600	49	7,3	80	76

Legenda:

>2 SD onder NAP 1-2 SD onder NAP NAP 1-2 SD boven NAP >2 SD boven NAP

Figure 2. Presentation of NAP scores through colour coding (with numbers).

Source: Bicknese and Slot, 2010.

indicators do not indicate deprivation; rather, the overall visual picture shows where deprivation is located. While this table already contains a surfeit of information, it is only when changes in the NAP are reported that the effects of policy interventions are brought into the assemblage.

In the same policy document, we find a similar table (Figure 3). In Figure 3 the actual scores of the NAP have disappeared, although the remaining colours are based on them. All neighbourhoods are represented on the left, the ten indicators are above. The colour blue signifies social problems while the policy intervention is represented by the '+' and '-' scores. If the NAP score goes up (those boxes marked with a '+'), the policy intervention is deemed to have worked.

In conclusion, we see that the NAP as a device creates an assemblage of entities and knowledge about this assemblage. Through the NAP, programme

**Normaal Amsterdams Peil (2010) en de veranderingen in categorie ten opzichte van het NAP 2008
(beter +, slechter -)**

	Leren en opgroeien		Integratie en participatie		Werken en economie		Wonen en leven		Veiligheid	
	Citicoscore (2010)	% met start kwalificatie (juli 2009)	rapportcijfer sociale cohesie (2009)	% minima jongeren (2008)	% NWW 1-1-2010	banen per 1.000 inwoners 1-1-2010	% sociale huur (2010)	rapportcijfer eigen buurt (2009)	objectief (2009)	subjectief (2009)
Oost										
Transvaalbuurt	-		+						+	+
Indische Buurt West	+			+				+		-
Indische Buurt Oost	+		-				-			-
West binnen de ring										
Landlust			+							
Erasmuspark	+									-
De Krommert:										
Van Galenbuurt			+							
Hooftweg e.o.	-									-
West buiten de ring										
De Kolenkit	-	+	+					+		
Slotermeer-Noordoost	+									+
Slotermeer-Zuidwest	+									
Geuzenveld			+		-		-			
Osdorp-Oost	-									
Osdorp-Midden		-					+			
Overtoomse Veld									+	+
Slotervaart			+							
Noord										
Volewijk									-	
IJplein/Vogelbuurt										
Nieuwendam-Noord	+		+							+
Banne Buiksloot					+			+		
Zuidoost										
Bijlmer Oost (E,G,K)					-					-
Amsterdam 2010										
totaal	+/- 6x -/- 4x	+/- 1x -/- 1x	+/- 7x -/- 1x	+/- 1x -/-	+/- 1x -/- 2x	-	+/- 1x -/- 2x	+/- 3x -/-	+/- 2x -/- 1x	+/- 4x -/- 5x

Legenda:

>2 SD onder NAP	1-2 SD onder NAP	NAP	1-2 SD boven NAP	>2 SD boven NAP
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Figure 3. Presentation of NAP scores through colour coding (without numbers).

Source: Bicknese and Slot, 2010.

managers and policy administrators know where deprivation is located; it provides these facts with a certain ease. So long as new data is generated for the ten indicators, it will automatically provide new averages and new SDs. These new scores can then be colour coded and compared to earlier results to analyse whether policy interventions have worked. The NAP thus becomes a device that produces mobile, 'hard' numbers for the service of policy evaluation practices. The following section reveals the function of the NAP's mobility for the service of other policy practices.

Deploying a device

In this section we present two vignettes that show how the NAP is deployed in governmental interventions at different levels of the policy process. First,

we show how the NAP is used by programme managers and policy administrators, who are responsible for the implementation of the Amsterdam Neighbourhood Policy, to legitimise the choice of neighbourhoods and interventions to other actors involved. Second, we show how one particular district administration in Amsterdam continues to use the NAP in a so-called 'bottom-up' policy programme after the NAP has ceased to exist as an official evaluation tool in the Amsterdam Neighbourhood Policy.

Communicating through/with the NAP

Given the scale of the Amsterdam Neighbourhood Policy, programme managers of the Project Management Bureau are accountable to numerous partners on different levels. Part of their work is to communicate with various actors involved – the central government, local and district administrations, housing associations but also residents:

The main levels are the level of the central government [*bet Rijk*] and the local administration, our own administration. [We have] to be able to show them what exactly it is that we are talking about. For instance, what is the size of the problem? And why should we spend public money on it? Basically, we answer the question: how bad is it? (Programme manager PMB)

Doing so, the programme manager uses various policy instruments, but she emphasises that the value of the NAP rests in its ability to 'objectively' represent the state of neighbourhood deprivation. It is valuable because it enables 'communication' between different partners in a large-scale policy intervention:

It helps us to have more of an objective basis in order to start a conversation about which measures are needed to improve these neighbourhoods. But it also helps us to share an analysis on 'what is happening in those neighbourhoods?' And that is a conversation we have with residents, but also with partners. [...] We attempt to draw an objective line in the abundance of policy instruments which we can use. The NAP isn't decisive in those conversations, but it does come in handy if you do have something objective as well. (Programme manager PMB)

The NAP is thus used at different levels of the policy-making process to help the programme manager explain and account for the choices and actions made within the Amsterdam Neighbourhood Policy. The NAP's objectivity enables its mobility: it can travel between different levels of government because all actors understand and underscore the 'truth' represented in its numbers.

The NAP is also used to help policy administrators communicate with those who are subject to the policy interventions, namely neighbourhood residents. Here, policy administrators not only engage residents in conversation; they try to influence what they claim are their 'subjective' perceptions of problems by confronting them with 'objective' measurements, as captured by the NAP:

On a much smaller level we use that data to engage in conversation with residents and to check whether their experiences, about problems in the neighbourhood, well, to tell them: 'look, that is your perception, but if we take a look at the numbers we see for instance the following. Do you recognise that as well?' or we ask them 'if you had to prioritise, what would you say is the most important problem to tackle?' We try to give people an image about the state of their neighbourhood so that they as well can communicate with each other on whether the neighbourhood is improving or deteriorating. When it comes to safety it becomes very clear. We have a safety index which is an integrated part of the NAP. There is an objective and a subjective side. And what we see very often is that if people feel more unsafe in a particular neighbourhood it will improve objectively, but if you don't communicate well about that process the subjective experience will continue to influence their perceptions and reinforce their feelings of unsafety. In the centre of Amsterdam, for instance, almost nobody feels unsafe, while objectively it is the most unsafe neighbourhood. There are a lot of robberies, a lot of theft. Objectively, it is completely red. Yet, if you ask people: 'well, what do you think about this neighbourhood?' then subjectively it is completely green. So, we use the numbers to engage in conversation, to communicate with residents. (Programme manager PMB)

Interestingly, by deploying the NAP to contest the local, situated experience of residents, policy administrators fold subjective experiences back into an objective index. Here we see an objectification of subjectivity because both detectable and subjective aspects of crime and safety are objectified through the NAP.

Thus, the NAP functions as evidence and can be used as such in the outside world with particular ease. It helps to start a conversation with diverse publics. This reveals the mobility of the device: it does not change between settings; nor does it require much translation. With its numbers, the NAP is perceived – and valued – as objective and transparent by partners in the central and local government and by residents alike. Notice also how the policy manager makes use of the visual assemblage of problems enabled through the NAP, talking in terms of 'green' and 'red'. To understand the problems, one does not need to be familiar with the specific numbers or how they are arrived at. The colour coding enabled by the process of quantification is clear enough: these are the facts of the matter.

Appropriating top-down evaluation in bottom-up policy making

Since the start of the Amsterdam Neighbourhood Policy, the NAP had become the prime index for assessing the state of affairs in Amsterdam neighbourhoods. Policy documents from the district of Geuzenveld-Slotermeer in 2009 and 2010 specified the NAP as a focal point in their interventions:

Researching the effectiveness of the Amsterdam Neighbourhood Policy is not easy. Influences cannot be isolated [...] This is why within the Amsterdam Neighbourhood Policy, we [the city district administration of Geuzenveld-Slotermeer] choose to measure a number of phenomena without directly relating them to policy programmes [...] If it goes well, then the Amsterdam Neighbourhood Policy can be continued less intensively or stopped [...] Determining whether it goes well or less well is done through the use of the Normal Amsterdam Level (NAP). (Stadsdeel Geuzenveld-Slotermeer, 2010: 9)

However, even after the Amsterdam Neighbourhood Policy had ended and the use of the NAP as an official evaluation tool had been discontinued, the index continued a life of its own, informing decisions and interventions by policy administrators and local politicians in the district of Amsterdam New-West (formerly Amsterdam Geuzenveld-Slotermeer). In the preface to the district's 2012 annual report, the first following the end of the Amsterdam Neighbourhood Policy, the alderwoman for Welfare, Care and Youth explains the continued investment in the district despite the termination of the Amsterdam Neighbourhood Policy:

We present the 2012 annual report of the area arrangements [*gebiedsarrangementen*] for the priority areas of New-West. When the Amsterdam Neighbourhood Policy ended in 2011, we, the daily administrative board of New-West, wanted to keep investing in those areas that are most in need. Precisely these areas needed continued government commitment; otherwise the work of the Amsterdam Neighbourhood Policy would have been for naught. We have analysed the areas where the problems are most severe, the so-called priority areas. [...] We want to provide custom-made solutions [*maatwerk*] for these areas, because each area demands its own approach. Each area needs something different. And that is what matters! Custom-made solutions have to come from the bottom-up, from residents and professionals who live and work [in Geuzenveld-Slotermeer] and know what is going on. [...] We have invested in eleven target areas, the priority areas, to make sure that these areas of New-West will increasingly move in the direction of the Normal Amsterdam Level (NAP). (Stadsdeel Nieuw-West, 2013: 3)

There are two observations to make here. First, the success of 'custom-made' interventions originating from the 'bottom-up' will be measured, and therefore legitimised, by the NAP; paradoxically, bottom-up policy making will thus be evaluated with a tool that has its origins in top-down policy making. Second, as we have shown, the indicators that make up the NAP can only *loosely* be related to planned policy interventions. It is impossible to measure and thus say anything about 'custom-made' interventions. Note that this was also recognised by the district administration of Geuzenveld-Slotermeer in 2010 quoted above: '[W]e choose to measure a number of phenomena without directly relating them to policy'. Yet, the NAP, as a device, continues to produce numerical information about the neighbourhoods and therefore it can be used to evaluate the effects of these newly designed policy interventions notwithstanding the intentions of the research and statistics department or other actors involved in the design of the NAP. Hence, the termination of the NAP does not stop the district administration of New-West from using the NAP and tying specific policy interventions to the priority areas.

Our informant at O+S explained that she still calculates the NAP for New-West as its administrators and politicians have grown attached to the index:

The NAP trickles down into some districts. We have calculated it for a city district administration because they wanted to know, for themselves, how their neighbourhoods were doing. [...] New-West has decided to work with its own priority areas and they have used the NAP for that [...] Having been part of the Amsterdam Neighbourhood Policy they have probably grown accustomed to these indicators informing them about the state of the neighbourhood. (Researcher O+S)

The practice continues to this day, four years after the last city-wide NAP was calculated in 2010. These two vignettes show that district politicians and policy administrators working on the ground have grown accustomed to a specific evaluation tool, namely the NAP. It presumably makes them feel that they are on solid ground, especially if they are in the process of experimenting with bottom-up policies and custom-made solutions. Put differently, the use of a familiar evaluation tool – initially designed, and thus legitimised, top-down – helps them make sense of the state of the neighbourhoods they are intervening in. In conclusion, the NAP has had a lasting effect on how district politicians and policy administrators, in this specific district of Amsterdam New-West, read and understand the social problems of neighbourhoods and it remains to steer the policy interventions that are designed for these neighbourhoods. As such, the NAP continues to enact 'deprivation' in the neighbourhoods of the Amsterdam New-West district even after the Amsterdam Neighbourhood Policy, through which it has come to life, has ended.

Conclusion: Lost and found in quantification

In this article we have described how the 'Normal Amsterdam Level' (NAP), designed as an index and evaluation tool for the Amsterdam Neighbourhood Policy programme, acts in material practice as a device through which neighbourhoods are assembled and ordered in specific ways. By bringing these heterogeneous entities into the NAP and stabilising their relations, the NAP acts not only as an evaluative tool but also as a device that generates 'hard' evidence for programme managers, local politicians and policy makers to legitimise their interventions. It is in and through the NAP that a neighbourhood can legitimately be qualified as 'deprived'. The NAP, as a device, is constructed out of *semiotic*, *statistical* and *visual* techniques that enact relations: especially the visual representation of tables and colour coding enables the classification of neighbourhoods as 'deprived'.

Keeping Figures 2 and 3 in mind as the ultimate and most complex figures in which all actors are enacted in relation to each other, we suggest that a number of processes can be discerned from the use of the NAP in policy documents – processes in which facts and relations are lost and found again. First, there is a process of simplification (Star, 1983) in which complexity is reduced to ten indicators. The ten indicators account not only for various social problems found in the neighbourhoods, but also for diverse policy interventions: 500 policy projects were eventually reduced to a plus or minus sign in the table presented in Figure 3. They are encapsulated in ten indicators of five priority areas.

Second, in this process of simplification, there is objectification (Porter, 1992) and the suggestion of transparency (Drucker and Gumpert, 2007). Because both social problems and policy interventions are now represented by indicator scores and their changes over time, they seem clear and transparent, enabling objective comparison between neighbourhoods. After all, the indicators are the same for all neighbourhoods, signalling transparency and objectivity. Earlier research suggests that it is the process of quantification itself – moving from the domain of words to that of numbers – that enables this suggestion of objectivity and transparency (Hansen and Porter, 2012), strengthened by the historical relationship between numbers and rationality, objectivity and control (Hacking, 1990; Porter, 1996).

Third, through quantification there is a process of normalisation and making comparable that which happens. As all neighbourhoods are now represented in the realm of the NAP, they all signify the same social problems and comparison becomes possible (De Rijcke et al., 2016). Outliers have been removed and the NAP becomes the primal device through which neighbourhood policy administrators understand the task at hand. In doing so, they make it possible to homogenise problems and to enact a strong norm: that of the average NAP score (Espeland and Stevens, 2008; cf. Foucault, 2003).

Quantification makes the norm of the city-wide average not only visible but also possible: it is a norm that previously did not exist. Moreover, it is through this process of making comparable that the ranking of neighbourhoods becomes possible. While neighbourhoods were previously different entities that did not have to resemble each other and did not have to be compared, now, enacted through the NAP, they can be ranked, showing which neighbourhoods are 'bad' and which ones are 'good'.

Fourth, this process entails the creation of 'facts' or evidence which serves as legitimisation for the policy interventions. The NAP can be seen as a black-box and made into an 'immutable mobile' (Latour, 1986). It is able to travel from one site to another: independent from the context in which it is used it reproduces facts about these neighbourhoods. The factuality of the information the NAP enacts is especially suggested by the use of the term 'hard' by both of our respondents. Both mentioned the need for 'hard numbers' that they can build on, that they can trust, take with them into the field and can use to communicate with residents who are subject to these policy interventions. After all, programme managers, policy makers and local politicians also have to persuade residents of the necessity of the planned policy interventions. In this way the NAP can be understood as a black-box in which a complex, heterogeneous group of entities is assembled, structured and objectified. The process through which this happens, however, remains invisible; the complexity of neighbourhoods disappears in the process of quantification.

These four processes – simplification, objectification, normalisation and legitimisation – constitute 'rendering technical' (Rose, 1999; Li, 2007); they translate an issue into a legible field for governance and make it possible for central authorities to manage 'deprived' neighbourhoods at a distance. As a policy instrument the NAP is used by different actors – the central government, local and district administrations – to evaluate and legitimise policy interventions to each other and to residents. It has become a tool for knowing what is going on in various neighbourhoods and for showing the successes of various policy interventions. As such, the use of devices such as the NAP facilitates a trend in the current management of Dutch 'deprived' neighbourhoods, namely greater collaboration between central authorities and local actors, and integral policy making (Uitermark, 2014).

Other scholars have argued that indexes used in the management of local territories such as cities and neighbourhoods, gain their meaning through the actions and particular contexts of their users. Noordegraaf and Abma (2003) locate the meaning of measuring and managing phenomena like safety, criminality and liveability in how and under what conditions quantified tools are used (see also Noordegraaf, 2008 on the Rotterdam Safety Index). Our empirical case study of the NAP shows how a programme manager uses the NAP as a means to communicate about deprivation to neighbourhood residents and to legitimise policy interventions to other governance partners. The index is used to contest situated experiences of residents.

Still, we also demonstrate and stress the mobility, flexibility and relative autonomy of the NAP. Where Noordegraaf (2008) argues that indexes and their usage cannot be detached from broader socio-political conditions, we show that it is exactly the ease with which indexes like this can be detached and can travel between different policy and political contexts that makes them such important actors in social policy. As a device, the NAP even continues to produce 'facts' for a district administration after the political and administrative context – the Amsterdam Neighbourhood Policy – in which it has come to life has ended. It thus continues to act independent of its context of use. The index continues to enact deprivation and is able to travel through political and administrative contexts. It shows that 'there is nothing apolitical about "evidence-based" approaches and technical questions should not be considered as separable from political questions' (Valentine, 2009: 459).

Our analysis opens up indexes as dynamic devices in which entities are assembled in very specific ways and which lead to the production of evidence. Indexes play an active role in relation to the entities they measure: they organise the relations between neighbourhoods in a very specific way and make it possible to constantly produce facts about the 'state' these neighbourhoods are in. To understand *how* the process of quantification comes about is important for the field of social policy – and evidence based-policy in particular – because indexes are usually understood within the domain for which they are designed, in the case of the NAP, as an evaluative tool.

By looking at specific material practices (McKee, 2009) such as designing and deploying the NAP, we see that indexes such as the NAP are active agents: 'they judge, form networks, communicate and work performatively generating symbolic attachment and identity investments as they travel across time and space' (Hunter, 2008: 508). As such, this analysis offers a more complex understanding not only of indexes but also of other material agents such as policy documents. Rather than representations of decisions or policy plans, policy documents are 'living documents' (Hunter, 2008; Freeman and Maybin, 2011) in which assemblages are enacted (cf. Law, 2002). It is especially in this direction that future research in the sociology of social policy could benefit from a material semiotic approach – to more systematically analyse the material techniques employed in policy making to relate and bring together various entities. This is necessary because it will deepen our understanding of policy practices. Moreover, drawing attention to, and even repoliticising, the 'technical' aspects of policy making might offer new ways for researchers and citizens alike to engage and influence policy making on this level as well.

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Notes

1. Amsterdam is composed of administrative districts, each with its own district council. Sloterveer became part of the administrative district of Geuzenveld-Sloterveer in 1990. In 2010, another reorganisation reduced the number of administrative districts in the city from 14 to 8. The district of Geuzenveld-Sloterveer was integrated into the new administrative district of Amsterdam New-West.
2. The nationwide Neighbourhood Renewal Policy was placed under the responsibility of a special minister for Social Housing, Neighbourhoods and Integration (WWI). She was, however, a minister without portfolio and was placed under the responsibility of the Ministry of Housing, Spatial Planning and the Environment (VROM).

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