*The Metric We*

*The Quantification of the Social*

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**Introduction**

In spring 2015, the Chinese government announced a spectacular, indeed downright revolutionary, project. It plans to develop a "social credit system" by 2020. Data about individual behaviour from all spheres of society is to be collected, analysed and finally amalgamated in a standardised score. Online activities, purchasing habits, traffic offences, employment contracts, appraisals by teachers or managers, conflicts with landlords, how people's children behave – all these things can be incorporated into the system, where they will affect each person's individual social score. Everyone is to be included in the system, whether they want it or not. The idea is to create a complete picture of each person's value that will determine their opportunities on the housing, labour and credit markets. Public bodies will be able to draw on this information when they interact with citizens, and companies will be able to use it to get a picture of their business partners. With the system, the Chinese government wishes to reward honest citizens and sanction dishonest ones. The declared aim of the project is to create trust in society, a "mentality of honesty" – an aim that the Chinese government intends to pursue by means of total social monitoring.

A grim and extreme example, to be sure. However, it is representative of a general trend towards *quantitative forms of social rank ordering*, which increasingly represent an independent system of hierarchisation and classification. This book is about the development of a society of scores, rankings, likes, stars and grades. It looks at forms of evaluation and monitoring based on data and indicators that are leading to a wholesale quantification of the social. It describes a society of ubiquitous *sociometry*[1] or, in short, the metric we. From a sociological perspective, that quantified self-descriptions of this kind do not merely reflect a pre-existing reality but can instead be seen as a generative mode of manufacturing difference. Quantitative representations do not create the social world, but *re-create* it (Espeland and Sauder 2007). Accordingly, they should be understood as reality *sui generis*.

The new cult of quantification, what Jürgen Kaube once called the "frenzy for numbers" (cited in Hornbostel et al. 2009: 65) is closely related to digitisation, which is manifesting in highly varied

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[1] This term originated in the measurement of group structures (Moreno 1934) but is highly apt for all forms of social measurement using metric data.

spheres of life and radically restructuring them. The multifarious data that we produce and continuously store is generating an ever-larger digital shadow, sometimes with our consent, often without. In the world of Big Data, information about users, citizens or simply just people is *the* commodity to have if you want to make a profit. So it is no wonder that the information economy has developed into a monstrous creature that not only collects data on a massive scale but also analyses it using algorithms and makes it available to third parties for various purposes. Distinctions are constantly being drawn (and coded), with profound consequences for processes of classification and status allocation. Digital status data is becoming the "symbol of distinction" (Bourdieu 1985: 21) *par excellence*. The fact that practices of measurement, evaluation and comparison are not merely creeping in but spreading rapidly may, given the exponential growth in ways of generating and processing data, come as no surprise. But it would be too simple to one-sidedly interpret this general culture of quantification as technological in nature, since it also depends on the active cooperation of many social actors, who firstly must accept these sorts of processes and standards, and secondly must provide their data and allow themselves to be evaluated.

This development is driven not least by the popularisation of concepts such as transparency, accountability and evidence-based policy, where a central role is played by ratings, rankings and quantitative forms of evaluation. The idea behind these concepts is that possessing data gives us a better understanding of how to manage society, allowing us to implement more effective policies (Power 1994, Strathern 2000). We often rely on indicators which allow complex social phenomena to be reduced to a handful of numbers and make it possible to carry out large-scale comparisons. Indicators and numbers are therefore of fundamental importance for approaches to governance that make efficiency and performance key evaluative benchmarks; such approaches are often labelled with the imprecise heading of "neoliberalism" (Crouch 2015). The performance and target agreements that are becoming ubiquitous work on the assumption of verifiability, and this necessitates corresponding indicators. Hence, the "New Public Management" approach (where private sector management techniques are adopted in the public sector) leads more or less automatically to an extension of monitoring and reporting duties. Public institutions and private companies are also constantly increasing the amount of data they hold on citizens, customers and employees in order to monitor them and to be able to address target groups more precisely. This is complemented by changes in individual self-monitoring as a result of factors such as the increasing significance of the "entrepreneurial self" (Bröckling 2007), self-enhancement or new forms of self-

optimisation. Again, this frequently involves drawing on processes of measurement and quantification, because such processes are regarded as well suited to the task of precisely measuring individuals' performance curves and allowing them to "measure" themselves against others. Society is heading towards a state of continuous, data-based stocktaking.

Data shows where a person, product, service or organisation is situated, and directs evaluations and comparisons – in short, it produces and represents status. Constant measurement and evaluation results in intensified monitoring of both self and others. If every activity and every step we take in life is recorded, registered and input into evaluative systems, we lose the freedom to act independently of the expectations about behaviour and performance embedded in them. Ratings and rankings, scores and screenings, instil in us perceptual, conceptual and evaluative schemas that are increasingly based on data and indicators. "Status work" (Groh-Samberg et al. 2014) thus becomes reputation management, primarily concerned with obtaining good grades, rankings and scores. This applies all the more when people are insecure about their status and have an increased interest in assuring themselves of their standing – and the best way to do that is by using objective data. Seen this way, the newfound insecurity in critical sections of the middle classes can very much be understood as a driving force behind the craving for status that leads them to embrace quantification. But once again, blessing and curse are closely intertwined: the stability that objectified status information may give is purchased at the expense of making the competition for status more dynamic.

In the present day, there is a rapid growth in ways of recording the trails left by our lives and activities: purchasing habits, financial transactions, mobility profiles, friendship networks, health conditions, education and training, work results, etc. can now all be captured statistically. There are, to be sure, still ways to remain outside, or at least only on the periphery of, the digital world so that one avoids leaving data trails, albeit at the price of excluding oneself from key communication and networking contexts. All previous evidence shows that people are exceedingly liberal when it comes to publishing or sharing personal data. This data voluntarism is fed by a mix of a need to share, inattentiveness and an interest in new forms of shopping, information and communication. There is also an increasing demand for self-quantification, which turns individuals into willing data providers. Self-measurement and self-tracking technologies are a gold vein for data miners who want to describe and predict our behaviour as comprehensively as possible. The combination of growing amounts of data and increasingly sophisticated methods of analysis allows this individual

information to be combined with collective aggregates. Multiple dimensions of comparison are being opened up: we can be compared with norms, with other people, with performance targets that we are supposed to (or want to) achieve.

The cult of numbers, masked as rationalisation, has far-reaching consequences. It changes our constructions and conceptions of what is valuable or desirable. Indicators and metric forms of measurement represent specific concepts of social worth with respect both to what can be regarded as relevant and to what members of a society see, or are supposed to see, as desirable and valuable. In the regime of quantification, this sort of data enjoys great relevance; one need only think of the role of rating scores on commercial review sites or citation indices in academia. The more of an impress it makes, the greater its social impact. The symbolic dimension of this hierarchising sociometry is evident in the fact that many of the criteria on which the quantitative rank ordering is based are simply accepted without further question. If these criteria are experienced as appropriate, obvious and self-evident, crucial steps have been taken towards a naturalisation of social inequality.

Against this backdrop, there have recently been noteworthy attempts to look more closely at how value is created and how grammars of classification, differentiation and hierarchisation are established by quantifications (Espeland and Stevens 1998, 2008; Fourcade and Healy 2013; Heintz 2010; Lamont 2012; Timmermans and Epstein 2010). These approaches sometimes go by the name of "valuation studies". There is an economic theory of valuation that is concerned with ascertaining the value of certain goods (such as environmental and natural goods), generally ones that are not continuously traded or for which no fully fledged demand markets exist and hence no prices either. However, in the social contexts that I am concerned with the primary focus is not on prices but on forms of social worth and the positions within social structures associated with them. Valuation narrowly construed refers to *assigning* or *ascertaining* value, but the term should also be understood here as a sociocultural *practice of valorisation*: that is to say, a practice of conferring value on something. From this perspective, there is no prior, neutral, observer-independent value that simply needs to be "discovered" or measured; rather, there are processes in which value is ascribed and manifested. In an article setting out the new field of valuation studies, Doganova et al. define valuation as denoting "any social practice where the value or values of something are established, assessed, negotiated, provoked, maintained, constructed and/or contested" (2014: 87). If value is seen not as something given but as something socially constructed, one basic premise for analysing social processes of this kind is always: *things could have been different!* From such a perspective, phenomena as varied as

university rankings, performance measurement in the workplace, awarding points to hotel staff for friendliness, measuring how many steps you walk a day and publishing hospitals' mortality rates can be understood as part of a wide-ranging trend. The door has been opened to a *society of evaluation* that evaluates everyone and everything using quantitative data and thereby simultaneously establishes new orders of worth.

Against this backdrop, in this book I argue that the quantification of the social is not simply a specific way of describing society, but that it has three sociologically relevant effects (which have been neglected in previous research). *Firstly,* the language of numbers changes our everyday conceptions of value and social status. In step with the spread of quantification, the "colonisation of the lifeworld" (Habermas 1981) is also being driven forwards by instrumental conceptions of calculability, measurability and efficiency. *Secondly,* quantitative measurement of the social fosters the *expansion*, perhaps even the *universalisation*, of *competition*, since providing quantitative information reinforces the tendency to social comparison and thus also to competition. We can now be compared with others (more or less, better or worse) in many spheres of our social existence that were formerly not explicitly accessible to such methods of comparison. The expansion of competition is dependent on the prevalence and subjective habitualization of indicators, since competition must be detached from specific spatiotemporal contexts. In many spheres, it is ultimately only practices of quantification that enable an *orchestration of competition*, specifically competition conducted using numbers. *Thirdly,* there is a trend towards increased social hierarchisation because representations such as tables, graphs, lists or scores ultimately transform *qualitative differences into quantitative inequalities*. The consequences for the structuring and legitimation of social inequality have barely been registered. The central thesis of this book is that quantitative ascriptions of status ranks change our order of inequality, because things that could previously not be compared with each other are made comparable and brought into hierarchical relationships.

The next chapter begins by showing how quantification, calculation and metric standardisation have profoundly influenced the institutionalisation of politics and markets. Following on from this look in the rear-view mirror, the chapter examines the digitisation and economisation of society and identifies them as two key drivers of the quantification of the social. Chapter 2 builds on the first chapter to explore the relationship between quantification and social comparison. It shows how the availability of numbers leads to the formation of a social *disposition to compare* that directly places us in competitive situations. It could be summarised thus: no competition without data. The next four

chapters then examine some specific fields of quantification. Firstly, chapter 3 looks at ratings and rankings and their social impact; this is illustrated using the examples of global university rankings and rating agencies that assess the creditworthiness of states, companies and investment opportunities. Chapter 4 concerns scoring and screening as ways of determining social worth at the individual level, by reference to credit ratings, health scores, mobility status and measurements of academic performance. Chapter 5 tackles the new cult of evaluation in which we are all continuously encouraged to rate products, services and people, to award likes to websites or posts and to give feedback on how satisfied we are. Finally, in chapter 6 I investigate how much ground new forms of competition and optimisation are gaining as a result of practices of self-monitoring. Against this backdrop, chapter 7 explores who actually has the power to name in this numbers game. I begin by arguing that economic indicators and performance parameters are gaining ground, and with them staff trained to think economically and associated interests. I also show that expert systems and algorithms increasingly decide which values become prevalent and what new forms of competition emerge. Algorithmic power appears to be particularly well suited to deflecting questions of legitimation and bolstering commercial interests. Chapter 8 looks at certain side effects of quantification that occur in particular when professional standards are supplanted, target indicators provide the wrong incentives or intensified competition leads to time or other resources being lost. Chapter 9 analyses the connection between quantification and monitoring, since the prospect of transparency held out by numbers always also leads to more monitoring. Given the finding that the quantification of the social involves a high degree of willing cooperation, it is worth noting that monitoring does not just come from outside but that we are also driving forwards these sorts of developments ourselves. In conclusion, chapter 10 considers the reconstitution of social inequality through quantification. What regime of inequality is being formed as a result of the growing power of numbers and the rise of the metric we? Status data displays reputation and hence functions like symbolic capital that people can use for their own advantage and convert into other social currencies. The quantified society continuously observes and establishes differences between individuals that manifest as inequalities and are connected with very specific advantages and disadvantages. The logic of social inequality is, as it were, switching away from class conflict and towards competition between individuals.

When talking about this topic, one must be cautious not to fall into the trap of platitudinous and excessively one-sided cultural critique, since it is after all possible to make trite denunciations of any

step involving quantification on the basis that it reduces complexity and increases monitoring. This temptation is always close at hand, and in order to at least partially escape it I would again like to stress that numbers and data do of course play an important and essential function in modern societies, whether in markets, science and research, politics or the private sphere. Quantifications are of key importance for progress, knowledge and rationalisation. They help us to discover connections and understand the world. They are also of fundamental importance for many groups who are fighting for recognition and rights. Quantification certainly also has an emancipatory potential, because it can reveal discrimination and disadvantage or cast doubt on inequalities rooted in the need to have a good name or the right background. What the book is intended to reveal is the various social consequences that arise from the quantification of the social. After all, this is a megatrend whose scope has only been explored rudimentarily and that is restructuring our social environment right down to its roots. As a social scientist who also uses quantitative methods, I will (hopefully) not be suspected of falling prey to a general aversion to numbers or of rejecting quantitative measurement instruments wholesale. But perhaps precisely by working with quantitative data one gains a sharper eye for the diverse problems connected to using apparently simple and impartial tools for social measurement. As well as the enormous benefits that data can bring, there are also considerable risks and concrete social problems. This is especially true if we acquiesce all too casually to the development of "omnimetry" (Dueck 2013: 37), the cult of measuring everything, without critically questioning it.

Although there is only one name on the cover, writing a book is almost always a collective enterprise. I would firstly like to thank Susanne Balthasar, who during the writing process kept reminding me to go easy on the sociological jargon and contributed many ideas and reading suggestions. Fabian Gülzau and Thomas Lux were dedicated test readers for the manuscript and provided vital feedback. Oscar Stuhler worked through an initial unpolished version and helped me with many of my ideas and ways of phrasing things. Milan Zibula carried out research for me, and Katja Kerstiens proofread the text with a critical eye. My friend Thomas A. Schmidt's enduring curiosity was an inspiration for the book. Hagen Schluz-Forberg frequently shared observations about the quantification trend when we went jogging together (needless to say, both equipped with pedometers). Philipp Staab gave me friendly but critical comments. Martina Franzen invited me to the Big Data Brown Bag Seminar at the Berlin Social Science Center (WZB) in autumn 2016, where I was able to test my ideas out on a large expert audience. Finally, Heinrich Geiselberger opened the

## 10. Quantification's regime of inequality

"Clothes make the man" – this saying encapsulates the idea that status can be discerned from external signs. All the fine, and often not so fine, differences in conspicuous consumption, decorating and clothing styles and other expressions of taste are understood as a reflection of the social hierarchy (Bourdieu 1982). These external status symbols continue to be of great significance in our everyday lives, but in some cases they are becoming less obvious and harder to decipher. The days are long gone when you could always unerringly tell someone's socioeconomic status from their clothing and know who you were dealing with. Cultural codes of distinction now frequently take subtle forms. Often, the status position that somebody occupies is actually negated in their external appearance: for example, when a government minister rides to work on a rickety bicycle, or when Wall Street meets streetwear and Mark Zuckerberg turns up at Facebook's stock market flotation in a hoodie.

Today, we are no longer faced just with material inequalities and corresponding cultural practices of distinction, but also with numerical inequalities. Numbers describe, generate and reproduce status, and thus contribute to the institutionalisation of particular orders of worth. "Numbers make the man" would be a pithy way to describe the emerging new status regime that manifests in multifarious forms of quantification and numerical rank ordering. And these numbers relate not to bank balances or accumulated wealth, but to status data that describes and defines our value.

The course of the argument so far can be summarised as follows. I take the view that in the course of the development of new forms of governance, the rise of imperatives such as performance, transparency, accountability and efficiency, and continuous technological development (new review sites, social media, algorithms, etc.) a trend towards quantification of the social has emerged that has been superimposed over the familiar order of inequality. Even aspects of our lives that were once considered private and personal have now been incorporated into this drive for quantification and can be represented in data form. One key factor behind this development is a great willingness to imitate and cooperate among citizens, clients, users and consumers. The combination of people voluntarily giving away data, commercial demand and technological progress means the flywheel of datafication is gathering increasing speed. A second stage of the argument showed how the praxis of

quantification simultaneously satisfies and stimulates a social disposition to compare. Data creates a comparative Panopticon which opens up various dimensions of numerical comparison to view. The availability of data about status, performance or forms of worth encourages people to constantly compare themselves with each other. The universal language of numbers, its unambiguity and its suggestion of commensurability pave the way for a disposition to metric-based comparison to become hegemonic. A third stage of the analysis showed that in many cases quantitative comparison translates into competitive games of "better or worse" or "more or less". The quantification of the social is a key driver of the increasing "glorification of competition" (Rosanvallon 2013: 280). Numbers are being used to orchestrate competitions over position, who can improve the most, who can outdo others. For example, the development of indicators is unleashing competition in non-market domains. Evaluative data is relevant for service providers because they are competing for customers, market share and attention; and it is important for clients because they are now competing for credit scores, insurance premiums and bonus programme offers. Data on exercise, health or personal networks also generates competitive relations. Social competition is now possible between anyone who attributes importance (and who doesn't, at least secretly?) to how many kilometres someone has run, their health scores or how many friends or likes they have. Where a universalisation of competition of this kind is created through metric measurement of social aspects, it can be expected to have a direct impact on the structure and perception of inequality.

Against this backdrop, this final chapter turns to the inequality structures and fundamental dynamics that are emerging in the world of data.

*Manufacturing worth*

As we have seen, measurements and quantifications of the social are not neutral representations of reality. Rather, they are representations of certain orders of worth that are always based on prior decisions about what can and should be measured and evaluated, and how. Metric modes of representation purport to describe the way the world is in an objective, precise and rational manner. But by selecting, weighting and linking data, they simultaneously help to create a normative order. However, their numerical form surrounds them with an aura of irrefutable objectivity that gives them a unique social authority. It is far harder to cast doubt on a judgement based on numbers and indicators than on one that is presented as mere opinion. Techniques of objectivisation, such as the

transformation of social phenomena into the language of numbers, appear to be very well suited to eluding certain expectations of justification and immunising themselves to criticism. For this reason, quantifications are often able to profoundly influence our perceptual and evaluative schemas at both individual and social levels. One simply has to claim that one is measuring things the way they really are to neutralise criticism: the data doesn't lie.

It is ultimately this capacity for illusion that leads us all too often to forget that numbers are also bearers of particular political concepts, normative scripts, economic interests and collective interpretations. Taken-for-granted conceptions that are not subject to extended scrutiny are institutionalised by means of metric representations and navigate us through a cognitively and normatively prestructured space of values. Consequently, our sense for difference is shaped by the numbers we have available. How dramatically different our world of status might be if we were to draw on other criteria, and how contingent the question of worth ultimately is, was shown by Michael Young in a work imagining a futuristic meritocracy:

> Were we to evaluate people […] according to their kindliness and their courage, their imagination and their sensitivity, their sympathy and generosity, there could be no classes. […] Every human being would then have equal opportunity, not to rise up in the world in the light of any mathematical measure, but to develop his own special capacities for leading a rich life. (Young 2094 [1958]: 159)

The development of metric orders of worth can be described as a process of valorisation in which objects or people whose worth could previously only be quantified diffusely or not at all are given a numerical expression. Fundamentally, measurement, valuation and valorisation are three closely, often indissolubly linked processes of quantifying the social. Quantification always involves (to a not insignificant degree) creating that which it claims to be measuring. In the world of status, numbers therefore also have an *assigning* function, a dual character: they do not merely show value, but also assign it. This way of measuring and determining value can, in principle, relate to different dimensions of value, but all too often centres on aspects of profitability, efficiency, fitness or reliability.

In the resulting order of worth, everything has its place and a corresponding value. The numerous valuations specific to particular subsystems or fields result, to use Merton's (1995: 351) term, in particular "status sets": collections of status positions that individuals occupy. The data thus shows

what "market value" someone or something has in the context of the corresponding order of worth. It is now possible to continuously track whether this market value rises or falls, which also creates pressure to exert oneself, to perform, to improve. The fact that more values can now be quantified can certainly be seen as advantageous: comparisons can be made in very different dimensions and everyone can pick out aspects that compare favourably with others. Our status is not defined purely by our careers and education but also, say, by how far we've run or our health scores, which creates new opportunities for us to distinguish ourselves. If dimensions of comparison multiply, so too do opportunities to "score points" with certain achievements that were formerly paid little heed, and thus feel good about oneself.

Status data can function as symbolic capital and promises (sometimes considerable) social or material gains on the basis of reputation, which is why people strive to achieve ever better data. Symbolic capital gives people "credit" with others that they can use to secure advantages, and hence recognition, for themselves. People can use their reputation to improve their position, while conversely a bad reputation or dubious image can result in considerable disadvantages on the housing, relationship, credit or labour markets (or other markets). Hence, symbolic capital in the form of status data can be converted into material advantages or useful contacts. After all, it is the "display of symbolic capital" that ensures that "capital attracts capital" (Bourdieu 1987: 218). Value metrics offer considerable opportunities to gain advantages, because they enable direct comparisons of symbolic bank balances. Nowadays, in all sorts of different spheres it already simply takes a click to find out where someone stands, and this tendency will grow stronger in the future. If scores are understood as symbolic capital expressed in the language of numbers, it becomes clear that the symbolic can now be communicated and utilised far more extensively in this abstract and generalised form than in the traditional category of "good reputation", which is often confined to a particular location or field. Wherever performance scores, mass ratings or rankings tables are published, they confer symbolic capital as a convertible currency.

*Reputation management*

Consequently, the question that the status-oriented self must ask itself is: how do I become "reputation rich" (Fertik and Thompson 2015: 6)? The fact that we are able to mould and influence the game of data-based evaluations, rather than simply taking it as it is, virtually demands that we do

just that. Self-optimisation, after all, does not just mean self-development; in the contexts described above, it refers primarily to escalation and competition, so that individuals are increasingly required to improve and make visible their (measurable) achievements. In the age of the metric we, "making visible" means in turn that one must bank above all on "easy-to-quantify accomplishments" (ibid. 63), because the algorithms that are most frequently used are clearly best able to input and process information that is in a quantified form. Reputation scores can thus easily acquire the same status for individuals that economic indicators have for companies: people are prompted to carry out individual accounting procedures to ensure that their performance values are up to scratch. They have to act like investors and strategically apply their resources and skills in the right way in order to get better numbers. And they have to become entrepreneurial: that is to say, aware of risks, looking ahead, observing the market, flexible, self-reliant. These three things – individual accounting of one's worth, investment behaviours and an entrepreneurial orientation towards one's own numbers – make people into "capitalists of the self" (Fourcade 2016). Just as double-entry bookkeeping was a key foundation for the development of capitalist economics, the quantification of the social could foster increased rationalisation and focus on numbers in everyday life.

As described above, in the age of the metric we individuals comprise collections of data describing their worth. Once this data has come into the world and been stored somewhere, it can be mined and analysed for patterns. In addition, personal data can be used to predict future behaviour or to assess the "value" or potential risks of an individual for particular purposes. The moment we enter the digital arena as customers, self-measurers or simply as internet surfers, our data becomes a product that can be utilised, recombined and sold on. Even the most private things are now being commodified and can prove significant in ever new contexts. Following Bourdieu, Fourcade and Healy speak of "übercapital", a data-based form of capital:

> Data collection and analysis allows for the creation of classification situations, whereby individuals are being sorted, scored and slotted for the purpose of maximizing the extraction of profit. As technology allows these acts of classification to coalesce and unify, they crystallize – for the individuals classified – into what looks like a supercharged form of capital. This "Übercapital", as we call it, thus refers to any form of capital accruing to individuals as a result of the operation of these actuarial techniques. Digital traces of individual "behaviors" (where behaviors are the product of instruments) are increasingly aggregated, stored, and analyzed into qualitative categories of membership that, in turn, are

presented and experienced as moralized systems of opportunities and just deserts. Individuals' übercapital then increasingly has stratifying consequences as it is used as a basis for the generation of price-differentiated opportunities, consequential social classification, and thus life-chances more generally. (2016: 2)

Compiling, accumulating, assembling and interlinking data from very different sources yields a huge amount of information and enables very extensive – one could say total – datafication of the social. Leisure activities, purchasing habits, health and income status, friendship networks, housing contexts, information about work environments and employers: all this can be collected in a single dataset that can then be used to lend additional dynamism to the "capitalisation of the lifeworld" (Streeck 2015a: 256). Ultimately, the quantification of the social brings about an intensification of commodification, binding individuals and their habits, preferences and lifestyles ever more strongly to market evaluations and hence also making them marketable. At the same time, the population can be broken down into ever smaller and more precisely targeted subpopulations using quantitative data collection and analysis techniques. These subpopulations can then be addressed and treated differently.

One example of such an approach is Acxiom, a company that is little known because of the low public profile that it keeps. *The New York Times* describes it as a "quiet giant" (Singer 2012). Acxiom is one of the world's largest providers of personalised information and holds data on hundreds of millions of people (over half the adult populations of the USA and Germany are contained in its database) with an average of over 1,500 pieces of information on each individual. What is unique about Acxiom's approach is that data is brought together from very different sources: for instance, as well as information drawn from the internet there is also data from registries and statistics offices. Big Brother-like, the sources of information and number of individuals included in the datasets are constantly being expanded, so that in future Acxiom will be able to provide paying customers with extremely detailed status information about every individual. These customers will then be able to better tailor their products to particular target groups. Acxiom's classification system, Personicx, divides the entire data population into 70 socioeconomic clusters with exotic-sounding names such as "Top Professionals", "Metro Strivers" or "Children First". The latter group (to give one example) comprises prosperous singles and couples with at least one child. In their free time, they like doing things with their families: going fishing, camping or visiting zoos or theme parks. Their primary focus is on their children; their own hobbies and interests are less important, even if they do

continue to pursue them. Acxiom's hunger for data touches on very sensitive areas of life, for example when it accesses information about chronic health conditions or medication that then determines an individual's market status. Anyone who is assigned to Acxiom's lowest consumer category (known in the industry as "waste") will struggle to get a good mobile contract, a vaguely affordable health insurance policy or a loan for a holiday. Once the data has labelled them in this way, individuals will have great problems getting free of the stigma. Description becomes ascription; an individual is ascribed a characteristic that they can only change with great difficulty, that they are constantly reduced to and that from that moment forth determines what options are open to them. If at some point biometric and genetic data also comes into play in this wonderful new world of data that revolves around exercise profiles, financial scores and health status, there will be another quantum leap to look forward to.

In addition, the quantification of the social is creating new interfaces that allow information to be transferred between social subsystems. This can be seen, for example, when private sporting activities entitle individuals to discounts on their health insurance, when employers look at applicants' friendship networks on Facebook, when health status becomes relevant on the housing market or when credit scores affect educational opportunities. In these cases, data that has been collected in a specific field and for very specific purposes becomes a key indicator in other contexts. Hence, status classifications are often not confined to a single field, but pass effortlessly through the divides separating them from other spheres. To use a phrase of Luhmann's (2010: 132), quantification "facilitates border traffic between subsystems". It is able to create structural and informational links between different spheres of society. The true value of such collections often lies precisely in the possibility of extracting information that can be applied to other fields. Efforts to amalgamate all the data available about each individual into a total score that combines their different roles as consumers, citizens, amateur sports practitioners or employees are especially broad in scope, and give cause for alarm. The social score announced by the Chinese government appears to be at least an attempt to unify reputational orders in this way.


*Collectives of difference*

In the debate about the role of digitisation, it is often said that the internet could make a significant contribution to democratisation, to increasing participation among previously excluded parts of the

population and to promoting greater justice. Some observers even see digitisation as the "great equaliser" (Bohsem 2016), since it broadens access to education, information and purchasing opportunities regardless of socioeconomic status. Even in regions that lag behind with more weakly developed infrastructure, everyone now has equal opportunities to shop or to watch lectures from the world's best universities. Monopolies on information are being broken up, barriers to participation are being reduced and social media is expanding individual networking options. Opportunities for political participation are also becoming less exclusive and subject to fewer hurdles than in the past, for example as a result of online petitions.

Another perceived advantage of the comprehensive digitisation and datafication of the social is that crude categories can be replaced with more precise capturing of specific profiles and individual behaviour. In this way, digitisation is leading to a "difference revolution" (Kucklick 2014: 21) in which broad collective categories are giving way to fine-grained distinctions. Instead of being forced into large statistical collectives, everyone can now expect to be treated as individuals. It can be likened to zooming in on a group photo so that individuals stand out with ever greater clarity. Many people expressly want to be recognised with this degree of precision. Their sense of justice tells them that a society that describes us precisely using detailed analysis, rather than evaluating us on the basis of general ascriptions and assigning us to groups, is fairer.


Whereas early social statistics was primarily concerned with defining useful categories, the growth in individualised data means that it is increasingly possible to treat people as individual sociostatistical units rather than as part of a large class. Previously overlooked, concealed or deliberately and knowingly ignored differences can be identified, and hence also utilised, by means of metrics and algorithms. Once objective measurements for something have been established, it is difficult to return to a state of ignorance, and there emerges a social pressure, driven by various actors, to use the data in other contexts too, such as in staff recruitment, on the consumer market, in performance measurement, in the world of social relationships or on pension and insurance markets. Since knowledge about customers' habits and preferences is becoming ever more extensive, it is now possible to offer consumers bespoke products and services that are increasingly competing with standardised mass products and have been heralded as new growth drivers (Streeck 2016).

As indicated earlier, it is not just companies and commercial interests that are driving this process forwards; customers themselves also want to be treated as individuals. "Price me by how I drive, not by who you think I am!" (Consumers Union 2015) is a slogan used in the USA by the Consumers Union, which is campaigning to get insurance companies to calculate insurance premiums based on how consumers actually drive, not where they live or what their marital status is. As a result of this desire for precise, individualised measurement and evaluation, in future it will become increasingly difficult to develop foundations for solidarity and collectivism. Who would want to be lumped together with other (perhaps riskier) drivers if they can get a better deal with personalised premiums? Who would not want to be rewarded for healthy, risk-averse or precautionary behaviour? What insurance company would pass up the chance to distinguish risk groups ever more finely and incentivise cost-saving behaviour? Against this background, we are faced with the prospect of a *hyperindividualisation* based on infinitely many and endlessly combinable observations of difference. Quantification of the social simultaneously entails divisibility of the social. This individualisation does not take the form of liberation and emancipation; instead, the statistical information collected about individuals serves to separate them from each other. This kind of individualisation comprises a process of singularisation, targeting, identification, situating and differentiation of people within a larger mass. People are not regarded as "group exemplars" (Nassehi 2016: 71) and are no longer addressed on the basis of generalised properties, but are instead treated as individual vectors in a space of numbers, as individuals described by data.

Subjectively, people may well understand their personal data as a sign of individuality; however, the ambivalence of this data-driven hyperindividualisation consists in the fact that it must necessarily make reference to the collective. All performance data collected by self-measurers, every health score, every rating, is dependent on standardisation and reference to collective data. When insurers calculate whether someone is a good or a bad driver, this calculation depends on how well all the other members of the data pool drive. Here, the individual emerges only out of the collective: as an observation of difference, as a reference to a benchmark. But the collective we behold is no longer a collective based on similarity, but a *collective of difference.* The large, homogenised collective groups of the past are being replaced by new hierarchies with increasingly fine-grained distinctions. Hence, the metric we is a data cloud consisting of infinitely many individual points and not a unified whole held together by bonds of solidarity.

*From class conflict to competition between individuals*

How can we conceptualise this process of transformation? Are we undergoing a transition to a "digital class society" (Han 2015: 90) as some believe? Well, it is true that digital classification systems are increasingly determining the order of status in our society, but the result is precisely not a class formation in the conventional sense. Instead, we can observe a shift in the social inequality regime – away from *class conflict* and towards *competition between individuals*. The competitors can, alternatively, also be universities, hospitals, professions or states, depending which unit of classification we are focusing on. Conflict consists in direct antagonism or struggle between parties; whereas competition consists in vying with others in relation to specific performance goals (Werron 2010b). The quantification of the social is constantly opening new doors that enable further expansion of competitive individualism until the final bastions fall. Rankings tables, health scores, fitness points, performance indicators, review ratings and Facebook likes are bolstering the *disposition to compare*, out of which competition directly emerges. In this way, the conflictual mode is replaced by a competitive one. In a competitive society, every individual competes for position, recognition or better performance, instead of collectively struggling for power or just distribution. Conflict over influence, participation and redistribution has hence given way to a game of escalation – outdoing, overtaking, optimising – that undermines the possibility of developing collectives based on commoness. To use Marx's terminology, it is becoming less likely that a "class for itself" can form, because isolated individuals are no longer able to recognise shared class positions. The metric we is a mass of individuals who compete with each other, not a group unified by solidarity and cooperation. Hence, this order is primarily familiar with "competitive singularities" (Reckwitz 2015) who observe each other while also being observed by third parties. The establishment of competitive relations in many fields of society and the continuous exhortation to see one's identity as based on differences rather than similarities are undeniably well suited to fundamentally altering the character of society and putting essential core principles into question.

Today, a description of such a society may still seem like an exaggeration of individual trends. However, there are nonetheless good reasons to assume that the demands for measurability and quantification that are driving this development will not remain a surface phenomenon. As we have seen, it is not just tools and technologies for measuring the social that have experienced a quantum leap; the demand for data for purposes of social control is rising incessantly too. The scope is not limited to indicators used for centralised social decision-making, but encompasses a whole host of

other contexts in which data is now used. The increasingly prevalent semantics of status data, which constantly provides us with information about ourselves and others, contains changed relationship forms geared to more-or-less comparisons and escalation. The evaluative structures embedded in numbers do not remain external to individuals, but are drilled into them and reinforced by socialisation, social expectations and efforts at legitimation. They provide reasons, create incentives, establish relevance – hence, they determine what matters in a given context.

In this world, positive evaluations are earned above all by those who dazzle with good numbers. Feelings of self-worth are also affected by quantification: if an entirely normal concern about self-worth includes a desire for recognition (Franck 1998: 79), then it follows that people will attempt to achieve the best possible positions in orders of worth. Rankings, ratings and scores signal social worth. Where we do not know how others actually judge our performance, numbers can be a crutch for self-assurance. If we ourselves judge and classify other people on the basis of numbers, we too will be inclined to believe that other people also judge us according to these signals. This mutual presumption of relevance greatly boosts the rise of the metric we in society. As classification on the basis of data becomes universal, it gradually leads to us all becoming participants in a large-scale social game in which we judge, observe and compare each other. People are becoming hunter–gatherers of status points.

*Inescapability and status lability*

The exponential growth in the data about us that is available is making it less possible to start out anywhere with a blank slate. We no longer need reference letters to vouch for our reliability; people now trust the information revealed by the data shadow hovering over us and the multifarious digital footprints we have left behind. The sociological postulate according to which the course of an individual's life is understood in terms of "endogenous causal link[s]" (Maier 1989) whereby past events and developments affect present and future events and developments is being taken to an extreme by data-based structuring of social domains of activity. Past and future are not linked together by the interplay of individual or internalised influences and institutional opportunity structures; rather, future prospects are determined by comprehensive information stored on servers that can be combined into data biographies.

This creates a conservatizing effect: people are defined once and for all by data of their previous history. A "data behaviourism" (Rouvroy 2013) prevails that reduces human behaviour to the

measurable and the observable, and derives extremely far-reaching conclusions from the data. The archive of data about our pasts restricts our future horizons and options. Hence, the more that financial companies, recruiters, insurance companies or healthcare organisations access our data, the more closely that past and future will be linked. Forecasts based on extrapolation immure us in a corridor of numerical calculability. While biographical data has always been collected, the amount of information available about each individual used to be limited. Freeing oneself from the grips of this information is becoming increasingly difficult, if not completely impossible. The "right to be forgotten" is only very limited and difficult to enforce; attempts to acquire a "digital eraser" are often a (futile) struggle.

This trend is supported by the fact that systems do not just record biographical trajectories but also preferences and lifestyles. Data about online shopping, for example, is used to make product suggestions. The sites that someone visits are used to deduce their interests, and corresponding adverts are displayed. But although they are offered many different things, they are all similar to things they already know. We are being enclosed not just in media "echo chambers" but also social ones, and are only ever confronted with things that already lie close at hand. Someone who repeatedly visits Italy over the course of several years will no longer be offered fjord cruises in Norway. On the basis of purchases, mobility profiles, friendship networks and website visits, a world of customised offers is being created that excludes anything that does not "match" our profile. We are faced here with a *paradox of simultaneous proliferation and narrowing of options*. Wolfgang Streeck identifies in this the rise of a new form of socialisation marked by increased fragmentation and tribalisation:

> The expansion of individual options that comes with the digitisation of social relationships, including companies' sales channels, simultaneously means a curtailment of options available to choose from. As a result, chance confrontations with unfamiliar things and things that perhaps we did not choose only due to lack of knowledge are ruled out, and potentially productive disruptions of past decisions concerning identity are excluded. (2015b: 79)

As a result, lifeworlds are being divided into ever smaller segments that have less and less contact with each other. What remains are isolated micro-milieus, a patchwork of social enclaves, a fragmented social space.

Hence, in the digital world where nothing is ever forgotten we are all bound to a past status. Our past cannot be wiped clean because our status is primarily determined by a sum of past events (or should that be a sum of numbers)? This means that possibilities for reinventing ourselves, changing our status or simply escaping our past are becoming fewer: someone with a dubious financial biography will need a very long time to rehabilitate their financial status. Data trails from educational institutions or information about past health conditions can also bind people to things that happened long ago. For example, it is known that providers of online courses used at universities collect masses of information about students so that they can sell it. Recruitment agencies and potential employers will thus be able to include information about applicants' learning behaviour (speed, comprehension, frequency of errors, learning curve) in recruitment decisions made at a much later date. Similar (at least potential) forms of mass data screening already exist with internet-connected toys or educational software; they too enable talented individuals to be identified or screenings to be carried out at a very early stage, thus turning patterns of behaviour during childhood and adolescence into a permanent bonus or stigma. Many of these determinations of status are typified by a kind of inescapability; fate, or at least so it appears, is switching to autopilot.

One might think this is a novel and stabilising form of status security, since the link to previous biographical developments combined with the expansion of available data makes abrupt changes less probable. But running counter to this view is the fact that there can be no true feeling of security in a world based on continuous assessment and evaluation. Although the data traps us in a fixed mould, at the same time it also forces us into situations of comparison and competition that make our status less secure. Social orders geared towards dynamism and competition generate status lability rather than status stability and do not allow us to "become rooted in an enduring social position" (Schelsky 1960: 230). It is precisely the rapid frequency of evaluations and indicator-based performance measurements (which can reach the extreme of real-time monitoring) that indicates to all involved that status is only ever temporary. In such a world, there is no equilibrium and no permanent positions. Instead, social status is constantly reassessed and hence up for grabs. Hartmut Rosa (2016: 691) uses the image of people who have to ceaselessly walk up a downward escalator in order to maintain their status. The treadmill never stops. The quantification of the social is linked to status positions being allocated on a competitive basis, which is also changing the qualities of relationships. Ultimately, competitions are "systematically [based] on the idea of outdoing and escalation, and if they become permanent performative competitions they generate constant unease

and insecurity" (Rosa 2016: 695). Just like in many sporting tournaments, after the game is before the game. Though strictly speaking it should be: the game never stops!

Out of this there emerges a double movement of *cumulative status consolidation coupled with simultaneous status lability*, which at first glance seems curious. But a closer inspection reveals that what we have here are not two incompatible things, but two complementary and interlinked logics of status that enable a permanently high level of tension, uninterrupted exertion and the constant possibility of status loss. Information from the past constitutes a status reservoir; new evaluations allow this status to be confirmed but also revised. If everything is registered and many things are interpreted as relevant to status, this will inevitably lead to status stress. Anyone who is unwilling to carry out adequate status work or who demonstrates weakness or drops in performance will suffer losses. Nobody can feel secure: not the owner of a once well-regarded restaurant, not the field sales rep, not the researcher whose publication output is dropping. The past may be irreversible and determinative of status, but in a society of evaluation status must be constantly replenished or else lost. This ensures that everyone is constantly productive and motivated. As incessant quantification spreads to ever more spheres of life, there is increased pressure not to let up in one's digital status work but to keep ratcheting up one's performance. In a life of boundless, relentless competition of this kind, there is an increased risk of individual exhaustion and collective burnout (Neckel and Wagner 2013).

*Self-reinforcing effects*

Quantifications always come with the promise of tying orders of worth more closely to actual performance and hence making them more just, but this ignores the context in which such status data is frequently used. Where status data is part of the visible social hierarchy, there are often considerable cumulation and reinforcement effects. In sociology, the hoarding of opportunities and the gradual expansion of initially small differences are often analysed through the lens of the theory of cumulative advantage (DiPrete and Eirich 2006). This theory holds that early success makes future success more probable and, conversely, that disadvantageous positions tend to be self-reinforcing. "Success breeds success", as they say in America. An analogy is often made in this context to the exponential growth of invested capital as a result of the compound interest effect. To put it another way, the results of an individual's status work are highly dependent on their starting position. Someone who is successful and gains symbolic capital as a result will find it easier to unlock additional resources or to reap more benefits from existing ones.

This mechanism means that small differences in (measured) performance can lead to highly asymmetric reputational gains. Taking the field of science as his example, the sociologist Robert K. Merton (1968) coined the concept of the "Matthew effect" to describe this phenomenon: unto every one that hath shall be given. Merton showed that scientists who are already well known are cited with above-average frequency, which he attributed to the role of reputation. The symbolic capital that someone has gained, for example through their earlier publications, increases the attention paid to all their future publications. The decoupling of performance and success as a result of such forms of focused attention is not confined to the scientific field, but can also be found in the cultural and creative industries, among lawyers, doctors, politicians, journalists, IT specialists, investment bankers, etc. and even on social media (Frank and Cook 1995). Similarly, institutions that perform well in university rankings have a better hand to play with than "underperformers" when it comes to achieving further improvements. Cashflows, reputation, attractiveness to students and academics: all these things also depend on performance in rankings (Sauder and Espeland 2009). Data linked to reputation and attention often tends to create advantages for stronger performers.

Looking at the use of data in this way hence suggests that the idea that quantification creates a status hierarchy that reflects performance with increasing accuracy is misleading. Measuring the social and universalising competition do not guarantee a rationalisation of status allocation processes. People with better reputations can reap considerable bonuses, while a lack of good performance indicators can lead to systematic disadvantage and downward spirals. Although institutionalisation of status competition is resulting in the increasing prevalence of an activation culture focused on performance and optimisation in more and more spheres of life, it is linked to an inequality regime that in many areas tends to decouple performance and success (Neckel 2001).

However, by invoking objective data this system ensures that it maintains the semblance of fairness, which is what ultimately matters in societies that conceive of themselves as meritocratic. Quantitative data, uniform evaluative benchmarks and standardised procedures help to legitimise the competition for better numbers while concealing their ideological underpinnings and the normative principles that they realise. Claus Offe's early critique that in advanced societies, rather than status distinctions coming to be based on performance, the performance principle instead constitutes a form of disciplining that "rewards loyalty to dominant interests and forms of life" (Offe 1970: 166) could also be levelled at the quantification of the social.

To repeat: the cage of numbers that we have built for ourselves and in which we have made ourselves at home hence turns out not to be a haven of justice, even if some forms of discrimination may have been eliminated. In the present-day world of data, achievement and performance measurements are the core business of social evaluation, but they are often based on a reductionist conception of what achievements should be seen as relevant. Consequently, often only that which can be quantified is admitted into systems of observation and evaluation. Differences are regularly exaggerated, and our eye for similarities and commonalities is weakened. Furthermore, the number-driven orchestration of competition is linked to an overemphasis on, or even fetishisation of, that which can be expressed and measured in numbers.

Once sufficient data is available, more and more social classifications will ultimately come to be based on it. This wealth of data makes us more calculable, but it may also make us more calculating. The society of the metric we trains us to be numerocrats whose gazes are always fixed on numbers. Thus, the quantification of the social has the potential to create a new regime of inequality in which we are continuously evaluated and compared with others, and in which we must constantly strive to dazzle with good numbers.