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PLANETARY URBANISM – THE TRANSFORMATIVE POWER OF CITIES

How could information design bridge rationalism
and empiricism, and construct both the quantitative
and qualitative physiognomy of the society? Political
empiricism: a review of the exhibition "Planetary
Urbanism – the Transformative Power of Cities" in the
German Pavilion at the UN Habitat III Conference.

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Source: Arch+ Verlag; Kikkerbillen Gbr

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Information Design for political empiricism: in history

"Our age will perhaps be called the age of the eye. Modern democracy began with the speech, with the press, with the book. Today the cinema, the advertising poster, the illustrated magazine, the exhibition have become powerful. Anyone who wants to communicate something to people quickly makes use of the most effective optical means."

<div align="right">(Otto Neurath)</div>

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Florence Nightingale: Diagram of the causes of mortality in the army in the East
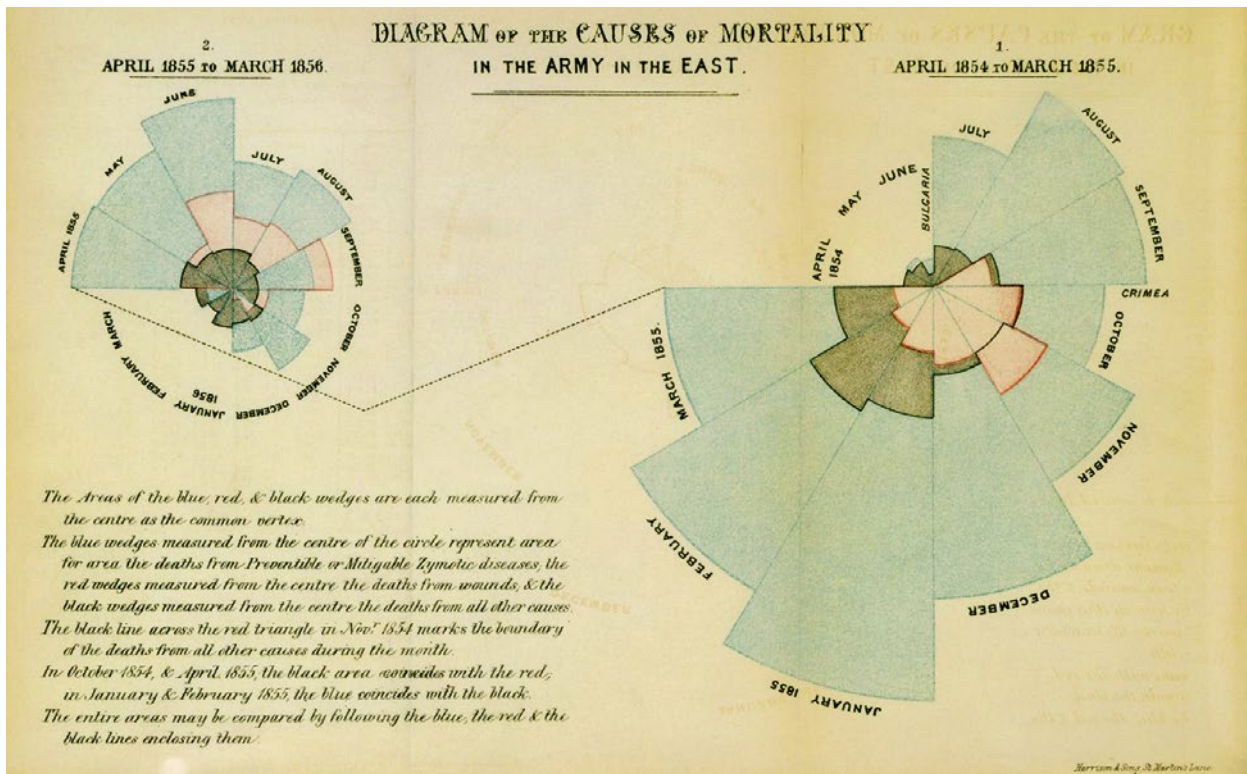
<div align="right">Source: Royal Collection Trust</div>

The type of information design we would like to discuss here could be introduced with a graphic from Florence Nightingale entitled "Diagram of the Causes of Mortality in the Army of the East" as part of her 1858 publication "Notes on Matters Affecting the Health, Efficiency, and Hospital Administration of the British Army". Nightingale, as we see here, was in fact one of the earliest information designers; with the media of coloured statistical graphic, she revealed that the epidemic disease had put more British soldiers on the death bed within the fatal hospital walls than the battlefield wounds did during the Crimean War, which could have been avoided or controlled by improving nutrition, ventilation, and shelter (Nightingale 1858). Through data collection and visualisation, she related death tolls in hospitals to cleanliness and maintenance and established the importance of sanitation. Known as the "Rose Diagram", the graphic transferred information of complex statistics in a clear and persuasive manner.

The importance of sanitation was again felt in the early modern metropolitans of Britain in the second half of the 19th century, as part of the challenges that came along with the Industrial Revolution. On the one hand, the dense and crowded living conditions of workers aggravated the spread of epidemics, forcing the government to find ways to improve city hygiene. As a consequence, medical and bacteriological sciences witnessed rapid development, the complexity of which called for a scientific framework for empirical studies and experiments. On the other hand, the inherent need of capitalism for non-interrupted reproduction drove entrepreneurs to conduct surveys of the working and living conditions of the working class. Development of various techniques of conducting empirical studies from statistics to interpretations, from cartographies to themed evaluations and presentations, took place in an epoch in which social imbalance and class conflicts drove the society to a point that such studies and interventions were urgently needed. In the same period came also water supply, canalisation, paved streets, as well as the extension of municipal infrastructures into households as the comprehensive modernisation that brought Europe to a new stage at the turn of the century (Krausse/Kraft 2012).

One practitioner of empirical surveys was the English social reformer Charles Booth, who documented working class life in London at the end of the 19th century. Not being a socialist himself but concerned with the conditions of the working class, Booth argued that introducing reform would prevent a socialist revolution from occurring in Britain. Being critical of the existing statistical data on poverty and aware of limitations of philanthropy and conditional charity in the society, he funded and conducted one of the most comprehensive and scientific studies into the social life in London and published the outcome under the title "Life and Labour of the People" in 1889, which influenced governmental intervention against poverty in the early 20th century (see LSE 2017a).

Indeed, the history of modernity and social reform is accompanied by empiricism. At another time in history – in August 1930 – Otto Neurath wrote in the introduction of "Society and Economy" (Gesellschaft und Wirtschaft), an atlas of pictorial statistics: "The general knowledge of social and economic conditions today is now recognised as equally necessary, as at the end of the nineteenth century the widespread of technical knowledge and, at the beginning of the twentieth century, the widespread of hygienic knowledge"

Otto Neurath: Diagram of Migratory movements of important countries, 1920-27
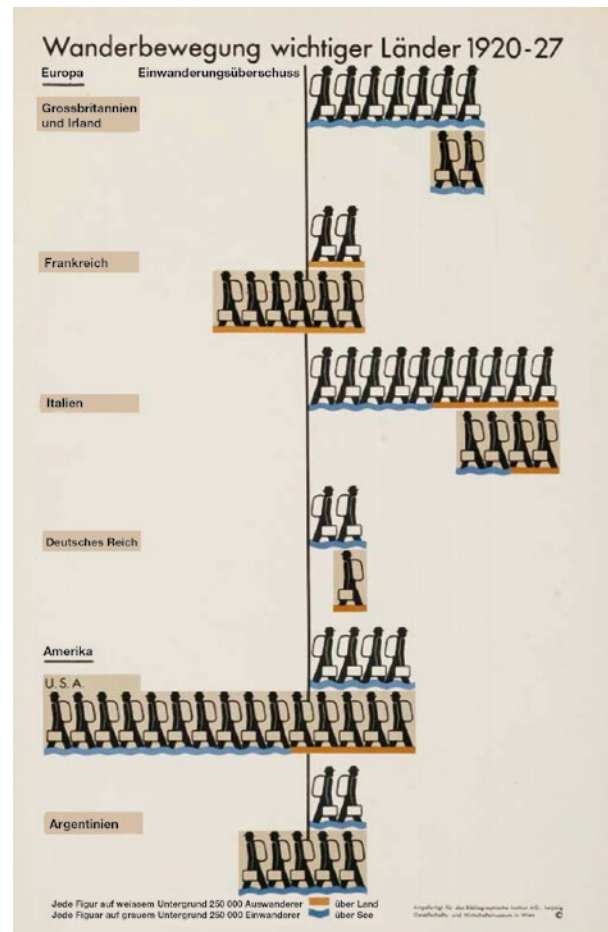
Source: Österreichisches Gesellschafts- und Wirtschaftsmuseum

(Neurath 1930). Funded by the Social Democratic Municipality of Vienna, he established the Museum of Society & Economy (Gesellschaft- und Wirtschaftsmuseum) in Interwar Red Vienna in 1925. At the museum, a new type of graphic presentation known as the Vienna Method of Pictorial Statistics was developed between 1925 and 1934, which was then renamed and further developed into International System of Typographic Picture Education (Isotype). With the help of Marie Neurath, who transformed complex information into

self-explanatory charts, and artist Gerd Arntz who further developed the graphic style, Neurath developed the method to show complex social, technological, biological and historical connections in pictorial form.

Neurath explained the ideas behind the museum: "Understanding all kinds of local planning needs some general understanding of social interrelations, history and comparative social engineering" (Neurath 1942). The museum was dedicated to educational purposes, to "representing social facts pictorially" (Neurath 1926) and to bringing dead statistics to life by making them visually attractive and memorable. It aimed to provide the people with social and economic facts, to call for the awareness of the working class. Against the capitalists' obsession of the "object", the museum exhibited facts other than artefacts, reproducible instead of immutable items. The museum's work was very much embedded in the administrative context, for example explaining how people's municipal taxes were spent. It was about everyday life (Vossoughian 2006), a presentation to the ordinary citizens how they fitted into the complex interconnections of the world (Burke 2009).

Although neither Booth nor Neurath was a politician, they were not apolitical. Booth realized that instead of being a politician, he would have greater influence by educating the electorate. Neurath especially differentiated between the different roles of a researcher and a politician. Nevertheless the affiliation with the government is noteworthy: Booth's research greatly influenced governmental intervention, and Neurath's Vienna Method would never have been realised without the generous financial support of the municipality of Red Vienna which strongly emphasised cultural and educational projects.

Being a believer in science himself, however, Neurath gave up the belief that science could present a single unified picture of the world and rather considered science not as an abstract system of thought but rather "in the hands of the social technician, who can orchestrate the different systems of knowledge to build new social orders" (Cartwright et al. 1996). Being aware how statistics were historically used in an undemocratic way, Neurath believed in the transformative potential of information and felt that they could serve as a tool in the struggle for equality, for politics of social change.

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Otto Neurath: Diagram of steel economy on earth, 1920-27
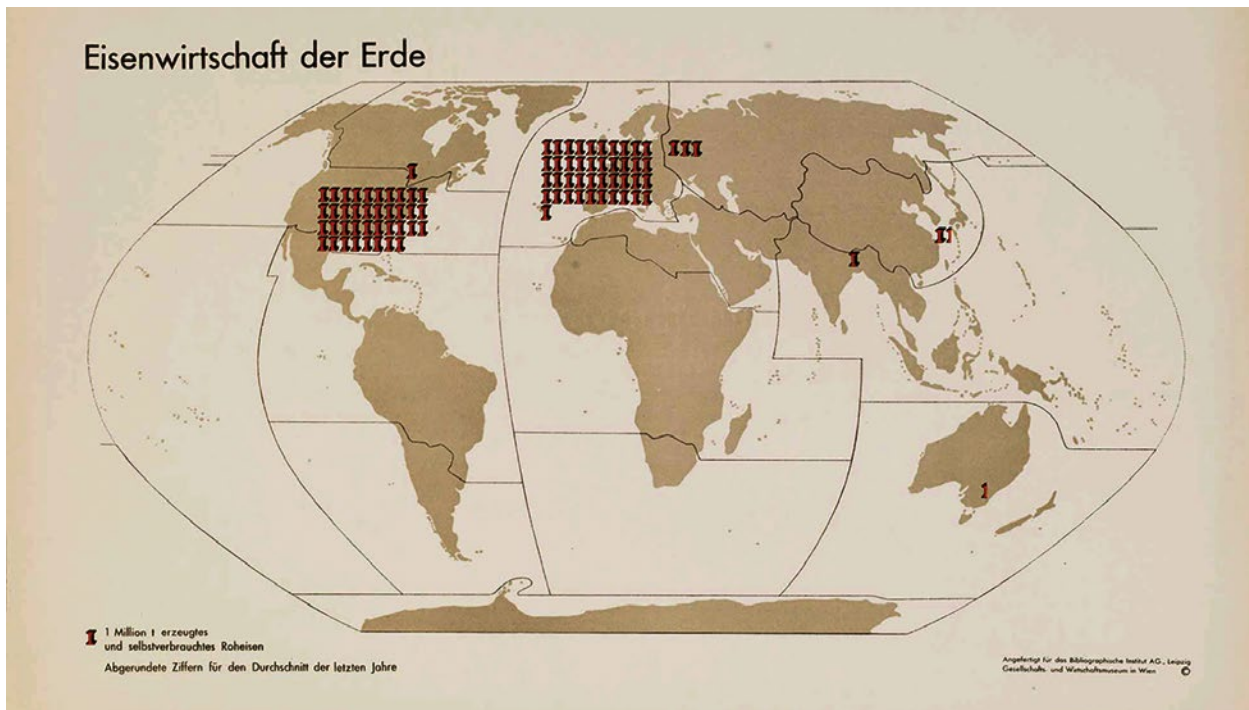
Source: Österreichisches Gesellschafts- und Wirtschaftsmuseum

Today: urban development outline as traced in the World Development Report 2009

Today, the societal upheaval, imbalance and challenges as a result of accelerating changes experienced in Europe in the second half of the 19th century are witnessing a parallel epoch in countries beyond Europe on a global scale. In the metropolises of the third world, the same pattern of the social relations in the 19th century in Europe has been repeated. Meanwhile, consequences of this process return to the West with flows of capital, goods, and migrants and create further inequality and disparity. The financial logic of the urban development has resulted in the irresponsible development mode that not just ignores social equality, in fact rather purposefully takes advantage of social goods for private benefits (Arch+ 2012: Internationaler Wettbewerb Out of Balance).

Regarding social equality, the World Development Report 2009 (Worldbank 2009) claims: "Two centuries of economic development show that spatial disparities in income and production are inevitable". The economists' obsession within their own field of interest is astonishing, as it describes: "Because governments care so much about domestic disparities, they jeopardise competitiveness and risk collapse". Admittedly seeing policy makers as "managers of the portfolio of places", the report warns that if they do not institute "flexible regulation and versatile land use conversion, they can make urban areas inhospitable to firms and investors". The message here is clear: governmental interventions are welcome only if interests of firms and investors are not compromised. Governmental policy is therefore subordinated under the economic logic and principle of concentration and convergence regardless of its socio-political cost: "Governments should not be faulted for being impatient with markets, and for trying to help lagging areas".

Although the World Development Report 2009 gained many critiques, one must admit that this report gave an accurate outline of the urbanisation trends, so that is almost worth being taken as a reference book. It reveals the logic that facilitated the development, as well as an account how and why our cities – especially those cities in Asia, Africa, and Latin America, which successfully placed themselves onto the global map – became the way we see them today.

One important contribution of the report is defining "the rule of thumb": various development strategies to be applied in different development phases: spatially blind institutions for incipient urbanisation (one-dimensional problem = 1D), institutions and spatially connective infrastructure for intermediate urbanisation (two-dimensional problem = 2D), and institutions, infrastructure and spatially targeted interventions for advanced urbanisation (three-dimensional problem = 3D).

By proposing that investment in "places" should be emphasised in leading areas with "durable investments that increase national economic growth" and investment in "people" in lagging areas with "portable investments that stimulate mobility and accelerate poverty reduction", this policy was the cause of the imbalanced development of cities of various sizes as well as the urban-rural dichotomy. The socio-political turbulence that we are experiencing today can partly be attributed to its consequences, with wealth, resource and information concentrated in certain urban areas while vast areas and people are left far behind. The spatially blind approach then turns cities into a pulling force to further attract the left-behind people. The result – migration – is not seen as a problem in the economists' eyes but rather a natural and even positive consequence: "The move towards density is quick in fast-growing economies, manifest in a rapid rural-urban migration that accompanies the shift from agriculture to industry". As the solution for such social problems, it is suggested that after solving the 1D and 2D problems, a developed nation must enter the third phase with targeted development, which finally takes the spatial factors into account. The question is: would the government in this later phase have enough fiscal capacity for further, spatially specific developments?

Moreover, by solving 1D to 2D to 3D problems, how long do the underdeveloped areas have to wait until they finally get a chance to develop and how long do people living there have to suffer through all these "necessary development phases"? Since "liveability, creativity and urban social integration" as the solution to the 3D challenges only involve highly urbanised countries with urban shares above 75 percent, it takes a lot of time to get there. Before that, "spatially targeted interventions are not always necessary" and "may have to wait until institutions and infrastructure have been improved". When it comes to slums – an issue to be addressed with spatially targeted interventions – institutions and connective infrastructure are a "precondition for applying targeted policies to deal with slum housing". Certainly,

"this takes time", so slum dwellers have to wait for infrastructure (roads, airports and communication systems) to be built so that the connectivity of the area could be enhanced at the first place. Would this finally give a chance to the area's development? One cannot help to wonder what a detour it takes to solve such immediate problems! It also gives quite a good explanation why slums exist side by side with elevated highways, as "urban transport, along with urban land management, determines the shape of the city and its ecological footprint. Urban mobility is particularly important for the poor". We know why Asian cities are spanned with networks of elevated roads right in the city centres under the motto "Put infrastructure in the most promising places". And what about the climate? "To be concerned about the climate does not mean that urbanisation should be slowed. If anything, economic density may need to be encouraged even more". Instead of recognising the inadequacy of existing economic models, facing the continuing urbanisation in developing countries before upper-middle income level is reached, the economists give in and are ready to sacrifice our social values and our planet so that the economic logic stays never-changing.

The stigma of this polarised result could be summarised under the term of neoliberalism, backed by its financial mechanism and incentives, characterised by uneasy collaboration between the state and private sectors and minimal state intervention in public affairs. Itself being an American invention in the late 1970s, it has become the dominating ideology and practice among the major economic players in the world ever since. In spite of the apparent failure of economic practices under the neoliberal economic theory, neoliberal practitioners have taken a blind eye towards the factual consequences of deregulation and reduced national influence on economic processes. While neoliberal economic theory in the West is not confronting the realities of its consequences and receives due critique far not enough, it particularly enjoys a misunderstood celebration in emerging economies.

On one hand, as we have seen, the dominating economic models are largely based on abstract theories and assumptions that have proved themselves to be far from reflecting realities. On the other hand, the lack of accountable and well-presented information has further generated false beliefs and the loss of faith in objective observations. The consequences are reflected in recent accusations of fake news and outcomes of election events. So what kind of social research and what kind of theory do we need in our age? No more ideologies and abstractions that reduce reality to axiom, and definitely more scientific thinking that must be differentiated from speculation.

We are confronted daily with information overload. The problem today is not the lack of information, quite on the contrary, a mélange. It is extremely difficult to differentiate true facts from the false, to filter out useful information, and to structure the data in order to better understand the reality. We could indeed speak of a "black transparency" of information. This directs attention to readdressing the importance of empirical studies, both as a tool to understanding the otherwise ungraspable realities and as an information basis for interventions.

Information Design for political empiricism: Exhibition "Planetary Urbanism"

> "*Political empiricism is not a mere collection of data; on the basis of a multitude of individual discoveries, it must draw up a society portrait which can provide information on where we are in the social development with regard to generally accepted values. In this sense, it is a sort of measuring instrument that can serve to the determination of a position, that is, social criticism, as well as a re-alignment of the course.*"
>
> (Sabine Kraft)

As part of the German Pavilion at the UN Habitat III Conference, ARCH+ brought the exhibition "Planetary Urbanism" to Quito from 15-20 October (for details and background of the exhibition, see http://www.archplus.net/home/planetaryurbanism-quito), sponsored by the Federal Foreign Office, consulted by the German Advisory Council on Global Change (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderung – WBGU) and in partnership with the Museum for Architecture and the Art of Engineering (M:AI).

Through entries of concrete examples, the exhibition gives a snapshot of the contemporary urban living conditions all over the world. The exhibition takes the form of visualisations through information design, as well as models and videos. Based on various focuses of the individual works, the exhibition summarises and presents the framework conditions and backgrounds as 6 themes, which serve as the guidance to understand and interpret the phenomena of the on-going global urbanisation process. The involved 6 themes are partly phenomenal and partly policy-sensitive, triggering political reflections and discussions.

In the exhibition "Planetary Urbanism", by highlighting the theme "Neoliberal Urban Policy", and placing it side by side with the theme "Informal vs Regulated", we aimed at enabling an exemplary comparison between the highly concentrated, privileged and isolated metropolitan elites (represented through the project "Gated Communities") and the left-behind urban squatters (represented through the project "Information Overload"), for whom no other choices are available than self-organisation. It is difficult not to reflect on these two themes if we seriously talk about a paradigm shift. Admittedly, land use is one focal point of the New Urban Agenda, as it calls for fulfilling the "social and ecological function of land with a view to progressively achieving the full realisation of the right to adequate housing (…) univer-

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Photo of the Exhibition "Planetary Urbanism – the Transformative Power of the Cities"

Photo: Carlos Cuenca Solana

sal access to safe and affordable drinking water and sanitation (…) to public goods and quality services (NUA 13)" – the would-be battlefield between cities for people and cities for profit. In terms of the theme "Migration", "human rights of refugees" and also "internally displaced persons and migrants" (NUA 18) are addressed. The themes "Urban Metabolism" and "Interconnected Cities" see their relevance in the New Urban Agenda in "facilitating the sustainable management of natural resources (…) that protects and improves the urban ecosystem and environmental services, reduces greenhouse gas emissions and air pollution, and promotes disaster risk reduction and management" (NUA 65), "supporting territorial systems that integrate urban and rural functions (…) thus promoting sustainable management and use of natural resources and land, ensuring reliable supply and value chains" (NUA 50). This goes on further to encourage "urban-rural interactions and connectivity by

strengthening sustainable transport and mobility, and also technology and communication networks and infrastructure" (NUA 51), heading rather in the partial direction of infrastructure development or the so-called Smart City. The theme "Local Effects of Globalisation" tries to draw a more complete picture of the process and history of globalisation, to reveal the power shifting game of the globalising process carried out with the backdrop of the worldwide adoption of neoliberalism (with the example of the project "Urbanism of Disassembly") and to illustrate how it has influenced and continues to influence the living conditions foremost in the Global South.

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Photos of the Exhibition "Planetary Urbanism – the Transformative Power of the Cities"

Photos: Carlos Cuenca Solana

Launched by: ARCH+ Journal for Architecture and Urbanism; Curated by: Sabine Kraft (†), Zhen Zhang, Anna Aichinger, together with Ursula Kleefisch-Jobst (M:AI); Peter Köddermann (M:AI); Exhibition Concept – Quito: Sabine Kraft (†), Zhen Zhang, Anna Aichinger

Partnership: Museum for Architecture and the Art of Engineering (M:AI); Supported by: Federal Foreign Office, Germany; Consulted by: German Advisory Council on Global Change (WBGU); Graphic Design by: kikkerbillen; Architecture by: AL BORDE

Implementing New Urban Agenda – "Mind the gap"

At the closing press conference of the Habitat III Conference, Dr Joan Clos, UN Habitat's Executive Director and the Conference's Secretary General said: "Urbanisation creates value to the citizens, and it is the responsibility of national governments to distribute this value in a fair and equal manner to all the citizens" (Kinver 2016). How the vision becomes an action must be a joint effort of all stakeholders but it must be implemented foremost on the political level. The sub-national level constitutes a further active force for the implementation; as Berlin's Mayor Michael Müller said, "The New Urban Agenda only has a chance of succeeding if cities are allowed to be involved in its implementation" (Perry/Herd 2016).

A high-level of implementation of the NUA for innovative and effective policy needs multi-level governance that recognises and encourages a network connection of actors as well as an enhanced territorial approach. Top-down, multi-sectoral, bottom-up and context-specific approaches must meet together. Interventions tailored to specific local conditions and assets are efficient with a territorial approach. "One-size-fits-all" is proven to be unable to deliver a long-term solution.

As summarised in the OECD paper (Charbit/Michalun 2009), to manage a multi-faceted governance relationship means: vertical interactions (across different levels of government) between the central and subnational levels, horizontal interaction (among the same level of government) among peer levels (e.g. among ministries, across regions, between municipalities) and networked interaction (lines of communication and co-ordination for a given policy objective) involving multiple actors and stakeholders in the public and private sector, as well as among citizens. However, five gaps are identified that challenge multi-level governance:

information, capacity, fiscal, administrative and policy. As the governance playground is becoming more and more complex, the need for coherence in policy design and implementation gets more importance. Coordination across and between various levels is crucial in bridging the gaps. Here we will focus on the information gap (the "knowledge gap"), which refers to "the asymmetries between levels of government when designing, implementing and delivering public policy". National and sub-national strategies face information deficits if sub-national authorities do not actively share knowledge "on the ground". They might have a wealth of information, but if not published and communicated to the central level, a gap is generated. On the other hand, sub-national level has only "partial" views, thus the central government must "manage the information in such a way as to support a broader vision that can link to accomplishing public policy objectives", pointing to the topic of data collection and data sharing.

Furthermore, as Cities Alliance discusses (Adelphi/Urban Catalyst 2015), the implementation of the NUA must be facilitated with effective monitoring, review and support mechanisms. Monitoring refers to "data processing to track progress on the goals and targets of an agreement e.g. through a set of indicators". The difficulties in monitoring include: the trade-offs between a more expansive set and crosscutting set of indicators, and a lack of standards in data availability, collection and interpretations, making it difficult to conduct a horizontal comparison. In Europe, over the years various monitoring platforms with various focuses on specific issues or topics have been developed, however it is important to integrate these platforms to an overarching, collaborative monitoring, review and support system. As "a critical assessment of progress towards the targets and goals", the review process could encourage political learning, providing suggestions to correct, improve or adjust policies. Support measures further provide "technical assistance, capacity building". When it comes to data availability, the capacity at the regional and city level is not always available. The following key components are identified to monitor, review and support the implementation of the New Urban Agenda: "a collaborative arrangement that aggregates, complements and aligns different monitoring platforms"; "an institutional architecture for the review process that secures political commitment, facilitates political learning, and creates an institutional home for this process"; "a support mechanism linked to the monitoring and review process that facilitates access to capacity building and technical support for implementation of the NUA"; and "meaningful participation of stakeholders in the monitoring, review and support process, in particular of local authorities and civil society organisations" (Adelphi/Urban Catalyst 2015).

Key words such as "multi-level governance", "bridging the gaps", "collaborative monitoring arrangement", "technical support", "participation" add up together and point to an integrated information system which can be shared among various actors. This is indeed a challenging information system. Under the term of multi-level governance, on the vertical line, it needs the central government to set up the indicators, the local authorities to provide "on the ground data". On the horizontal line, various layers of information must coexist to enable independent and collaborative data sharing among ministries. In the whole network, the data could be shared with other actors.

This rings a bell of the various opinions on data collection and indicator definition at the Habitat stage. Dr Eduardo López Moreno, the Director of Research and Capacity Development at UN-Habitat, advocated the indicators to be collected locally, and Professor Michael Cohen from the New School in New York City emphasised the need for a limited set of general indicators to enable comparability (Urbanet 2016).

It does seem that the only approach that could solve the central-local dichotomy is to create a system that enables an interaction from top-down and bottom-up. KOSTRA, a performance indicator system in Norway is such a system to convey data from municipalities to central government, between municipalities and to the public. Various types of data are collected, mostly objective data reported from the sub-national level. At the municipal level there are about 40 key indicators and additionally 10,000 indicators covering 16 service areas. Through its rationalised data collection and processing, uniform standards are set up to enable comparability thus benefiting the central government's assessment, while it lessened the administrative burden of reporting and providing a tool for internal planning and communication at the local level for the municipalities. In addition, "soft data" collected outside of KOSTRA are used in combination with data from the system (Charbit/Michalun 2009).

"Effective implementation of the NUA requires improved monitoring and transparent data, a review process to assess progress and foster policy learning, and support mechanisms to coordinate implementation and build capacities" (Adelphi/Urban Catalyst 2015). So what measures are needed to support data for multi-level monitoring? What elements are needed for the review process and judgment of implementation? What support measures could be taken for a review process? What ways are there to involve various actors and stakeholders? What mechanisms are needed to facilitate wide participation? What policy processes are needed to ensure that national urban development strategies are developed in a transparent and inclusive way?

Now if we add the dimension of the "territorial approach" as well as strengthening the horizontal comparability of various regions and municipalities, we might want to envision the above-mentioned quantitative indicator system combined with the geographical dimension. The result could be cartography of socio-political indicators. In order to bridge the information gap in the multi-level governance, and more importantly, to promote the participative process for more transparent policies, these indicators could be implemented and presented through "information design", to create a digital version of a socio-political indicator atlas quite in the sense of Neurath's atlas and all the way to Booth's detailed mapping.

In fact, Urban Age from the London School of Economics and Political Science (see LSE 2017b) and Habitat X Change (see Habitat X Change 2017), which were also present at the Habitat III exhibition area, are also headed in the direction of visualising science, or in our case, visualising statistics with geographic overlay. This sounds like and indeed is an enormous project. The definition of indicators is even more crucial in this case because of its immediate effect on the scope of the project.

Moreover, there are two scenarios defined by Cities Alliance, in which the NUA could be linked to SDG, namely as a guide for local implementation of SDGs and as a tool for systematic improvement (Adelphi/Urban Catalyst 2015).

Such an information system would bridge the vertical line of the central government and local authorities in data sharing and on-the-ground data collection, facilitate the horizontal line of inter-ministry and interregional collaboration and thus interdisciplinary comparison and synergy based on the same framework and mapping basis. It would be the basis of monitoring and reviewing process of the implementation of the NUA, be the support system to enable a broad participation of a network of actors and stakeholders necessary for increased accountability, transparency and ownership of the implementation through its direct visual presentation of data, and enable planning and investment decisions to be based on evidence and empirically collected realities, thus ensuring better policy making. With such an information system, the NUA would have the potential to bridge top-down and bottom-up and make its implementation organ contribute to the multi-level governance construction in general.

Rationalism and empiricism, Quantitative and qualitative physiognomy of the society

"We have to beware of seeing the people we deal with as mere quanta, whose thinking and behaviour is subject to blind laws. We know that even if they are constrained by their own opaque connections, they remain with the possibility of free self-determination and spontaneity, and that the law of the great number has its limit in this element of the spontaneous and conscious."

(Theodor W. Adorno)

One might hope that the economists, based on their accurate models, would work on some indicators that hopefully give an account of the reality. It turns out far more complicated than that. For example, different researchers examined how globalisation and inequality correlate with each other in China, giving all possible answers: positive, negative, and neutral. The difference resulted from the different use of measures such as data on tariffs and trade shares or city-level data on exports, as well as different approaches (Harrison 2007). Another example: although the number of people living on less than one dollar a day decreased in the 1980s and 1990s, the number of individuals living on be-

tween one and two dollars did not – giving some account of the not always reliable nature of a certain defined number (Harrison 2007).

When the World Development Report 2009 was published, it caused great dispute among economists and geographers. On the one side is the orthodox understanding of the economy as "a socially disembedded sphere" externalising itself above social political control, regardless of environmental and social costs. On the other polar are the pluralistic subgroups of economic geography today, speaking for "geographically differentiated economic processes, of so-

cio-spatial embeddedness, and of both the reality and the still-to-be-realised potential of alternative economic pathways". The conflict reflects the "diverging intellectual traditions of economics and geography, and their dissonant, if not incommensurate, worldviews". Indeed, geographers favour a more complex and ambiguous outcome implying context-sensitive and more cautious policy making, whereas classical economists search for predictable and clearly defined approaches (Peck/Sheppard 2010).

Facing the wide criticism, one of the authors of the World Development Report 2009 replied that, instead of attacking the geographic economists for ignoring the traditions of proper "economic geographers", a more constructive approach for the geographers would be to provide constructive arguments (Rodríguez-Pose 2010). If we are seriously talking about a paradigm change away from the mathematical theoretical axioms and quantitative evaluations, a new orientation towards the empirical studies and moreover to-

wards qualitative evaluations must be established. A middle way has to be met between the economists' and geographers' approach – one of an empirical nature combining the quantitative and qualitative characteristics (Peck/Sheppard 2010).

The quantitative methods, based on the mathematical models, create a distance to reality, in which human beings are reduced to numbers and abstractions. In order to reflect the reality, the quantitative aspects must be compensated through qualitative documentations. Just as for the KOSTRA system, "soft data" collected outside are used in combination with data from the system (Charbit/Michalun 2009). With a quantitative basis, it would not be difficult to add the qualitative aspect of the empirical reality.

It is important to reflect on the qualitative aspects of urbanisation when it comes to the implementation of NUA, especially as the majority of the enlisted topics in the agenda

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Vanessa Lang, Daniel Grasmeier, Sascha Herrmanns: Where there is light, there is shadow
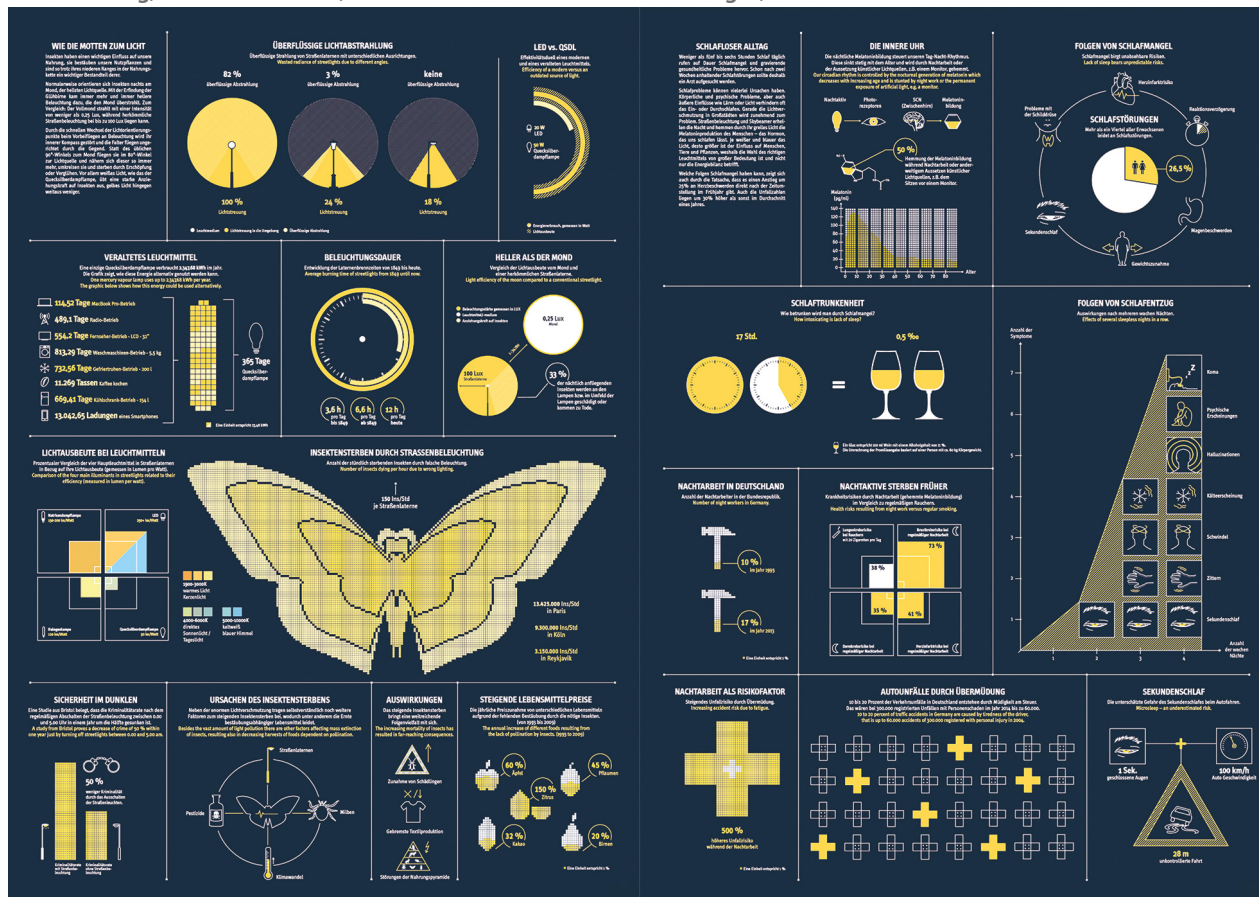
are of a qualitative nature. Ignoring them, or giving them up because of their unfixed nature would make a big discount on the real implementation. An obvious question would be: could they then be valuable "soft indicators" to perform the measuring function? In fact, precisely because of their unfixed and not absolute nature, they have the potential to become the real measure – that is, if they are used with care. Here it would be interesting to look at the description from Neurath again to review how he tries to define this intangible qualitative nature and how the qualitative is connected to the quantitative. Against the reductive approach of monetary wealth, Neurath made a distinction between "quality of life" and "basis of life". While the former displays degrees of intensity and reveals complex of experiences under the combined influence of pleasure, happiness and welfare, the latter defines the conditions that cause these experiences – "conditions of life" as he called it. By studying it one could portray "a life physiognomy": "what food the individuals consume per year, what their housing conditions are, what

and how much they read, what their experiences are in family life, how much they work, how often and how seriously they fall ill, how much time they spend walking, attending religious services, enjoying art, etc" (Neurath 1974, see Stanford Encyclopedia of Philosophy).

To examine the "quality of life" under the "conditions of life" in order to portray "a life physiognomy" and further the physiognomy of the society is exactly what the exhibition "Planetary Urbanism" was about and is exactly what is needed to supplement statistics and the "hard data" with more accountable "soft data", whose categories and presentations are numerous. Here are some exemplary cases as for what type of information design could be used for what purpose with examples from our exhibition or publication. Entries and figures mentioned are part of the ARCH+ publication "Planetary Urbanism" (Kraft et al. 2016) – the exhibition catalogue of the exhibition "Planetary Urbanism" at UN Habitat III Conference.

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Aditya Barve: Urbanism of Disassembly
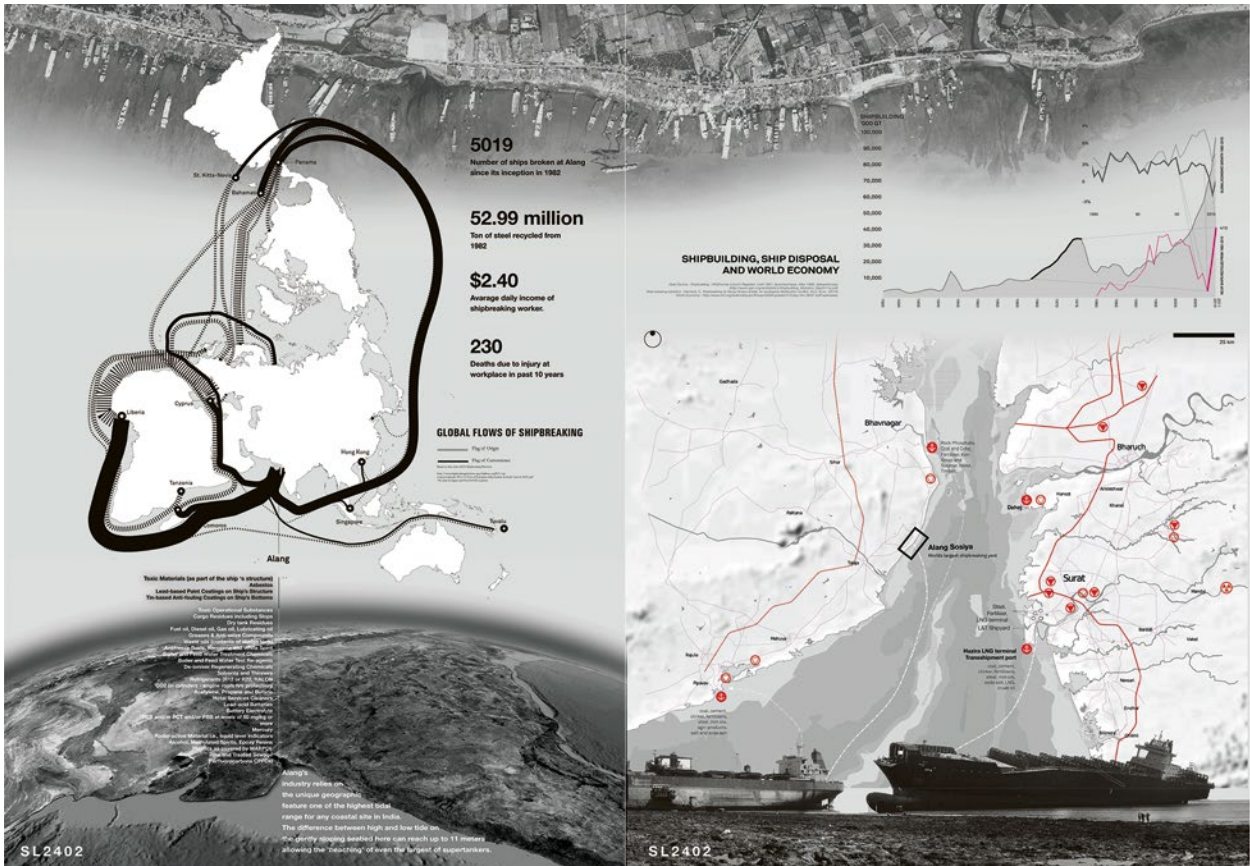
- Scientific analysis of a subject: "Where there is light, there is shadow" (Figure 6) is an outstanding example how a well-conducted study, which would be otherwise a lengthy report, can be turned into vivid graphics. Another example "Diagnosis City" is of a similar approach.

- Biography or a story of a subject: One example from the exhibition would be "Urbanism of Disassembly" (Figure 7), tracing the historic development and geographic displacement of shipwrecking activities. This type of information design gives inspiration, if a detailed study into a specific urban subject is to be conducted. Another example would be "The King's Giants".

- Organisation and workflow: "Just Trust us – or Take This" highlights the potential of information design of giving diagrammatic analysis of complex procedures or organisational forms – the capacity of graphic in this case is far beyond language. In fact, it would have been impossible with words. Such analysis could find its similar application in demonstrating organisation of institutions or project workflow.

- To raise social awareness and empathy: The most extreme "empirical" and "qualitative" example of the whole exhibition would be "Information Overload". Instead of presenting a "slum" area with mere numbers as would be the case in an economic statistical report, a narrative approach is adopted to tell the story of each street and each house, by mapping the lives and footsteps of residents, the graphic is not presenting the people as quantum, but gaining a considerable weight loaded with real lives. Another example "Gated Communities" goes from the literal to the metaphorical sense of the form of settle-

ment, as another extreme example of going towards the "qualitative" pole, trying to grasp the intangible experience of people.

- Economic plans compared not in monetary units: "World Metropolises: about Wages and Prices" gives an interesting horizontal comparison of living conditions not through money but through rice, bread and Big Macs, revealing insights impossible to be gained from mere statistics.

- Anthropological social portrait: The project "States of Refuge" gives a full account of the asylum living of the refugees in Austria, giving a documentation of a temporary condition of the society, the influence of which on people's lives and on the society as a whole is, however, long lasting. Another example is "A Stranger at Home".

- Portrait: Photos are still one of the mediums that convey a complex entity of combined information of various sources. „Motion Poster: Angry 99" (Figure 8) and „City Pixels" (Figure 9) are using portraits as speakers of their social status.

As related to the topic of participation, presenting information to the general public could also use various forms – not least in the form of an exhibition, as could be inspired by Neurath, such as our engagement with the exhibition "Planetary Urbanism". A further step is to actively involve the public in decision-making. Through making tools and instruments in the form of easily understandable graphic presentations available to the public, it could help enhance their ability to participate even if they do not have the bac ground to actively be involved in tasks such as design. In

this way, deprived neighbourhoods could be better integrated in the discourse. The Project "Cidade de Deus" provides a good example of such. The "Pattern Book" approach is an effective tool in workshops and design-charrette teams.

Besides the monitoring indicators that could be transformed into a systematic mapping of information design, multi-level actors could also get more familiar with this multi-faceted tool. By having information curators and designers on board as part of "co-ordinating bodies" (or "working groups" as an alternative if a specific topic is the focus), co-operation and collaboration among levels of governments could be promoted, and communication challenges could be overcome, bridging the information gap that hinders multi-level governance and participation during the process of the implementation of the NUA. The potential of "information design" as a tool in the implementation of the NUA could be explored first in some pilot projects in terms of the setting up of indicators as well as the application of various forms for various purposes, and further studies and deeper analysis could be conducted to gain more experience along this line. It is time that the business-as-usual economic logic should step aside and knowledge, information, and empirical reality studies should enter the stage.

The Head of the German Delegation, Gunther Adler, State Secretary for Building, addressed at the Opening Session of Habitat III: "Conventional development strategies can no longer serve as our blueprints. If we pursue business-as-usual, we will be steering the planet towards climate collapse and running the risk of grave social dislocation, with serious hardship, violence and waves of people fleeing their homes" (German Embassy Quito 2016). Even though it is said to work towards "an urban paradigm shift for a New Urban Agenda that will readdress the way we plan, finance, develop, govern and manage cities and human settlements" (NUA 15), as the former Co-Chair of the WBGU, Hans Joachim Schellnhuber, pointed out, "a paradigm shift on how cities need to be designed and built to make sure that we do not breach the planetary guardrails is not made clear" (WBGU Press Release 2016). Apropos of a paradigm shift, the Coordinator of the Habitat III Secretariat, Ana Moreno, mentioned in the Habitat III Journalism Project: "Unless we manage to have this capacity of knowledge connected with policy and accountability in twenty years, it will not be a real paradigm change. A paradigm change can only happen if behaviour changes" (Citiscope 2016).

9

Yiting Wu, Pengbin Ma, Ruimiao Hou, Yang Gao, Wenqi Zhu: City Pixels
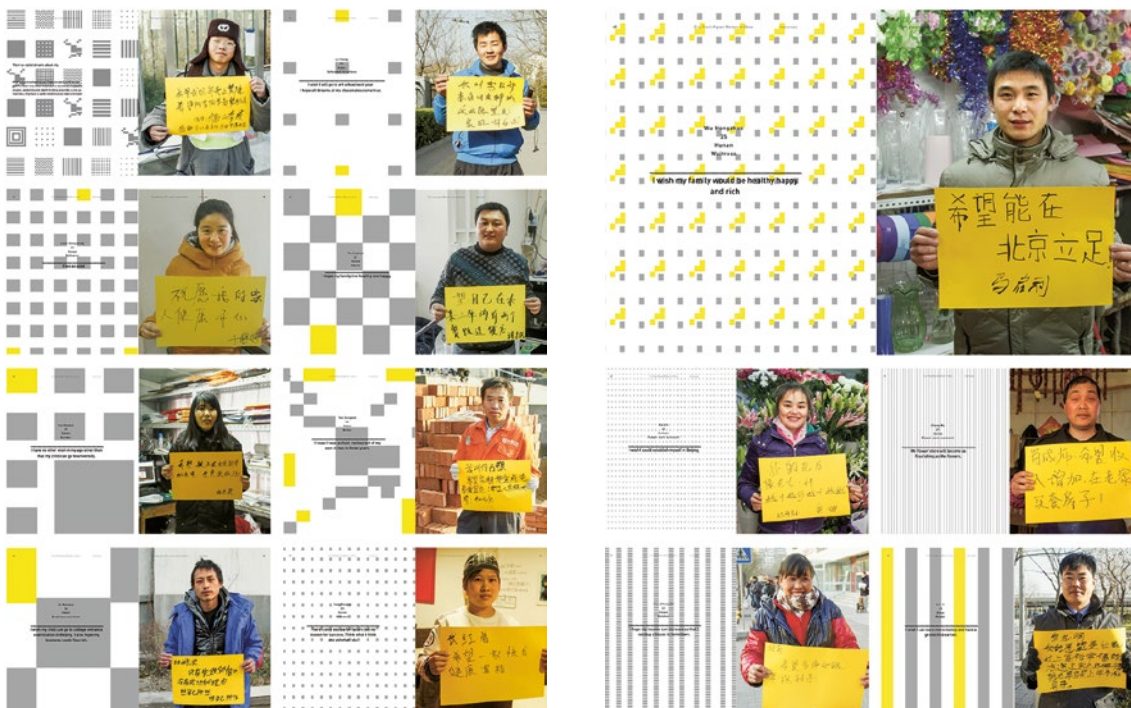
Source: ARCH+ Verlag

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