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My objective in this essay is not to analyse or criticize the diverse theoretical positions that make up the ample and complex field of debates on scale. Instead, in what follows, I first seek to contribute to mapping some of the main issues involved in the notion of scale, before turning to explore megaprojects as one of the most productive scenarios for us to conceptualise different scales. While acknowledging the importance of theorising scale, I posit that the notion of levels of agency provides a more powerful heuristic. Taking my own conceptual trajectory as an example, this paper also shows how interpretive metaphors and tools are refined over time. In the third and final part, I advocate in favour of using the Freudian notion of condensation to (re)conceptualise the heteroclite powers of structuration of different levels of agency.

Scale, megaprojects, levels of agency, condensation.

Meu objetivo neste ensaio não é analisar ou criticar as diversas posições teóricas que compõem o amplo e complexo campo de debates sobre escala. Em vez disso, no que segue, procuro contribuir para o mapeamento de algumas das principais questões envolvidas na noção de escala, antes de explorar os megaprojetos como um dos cenários mais produtivos para conceitualizar diferentes escalas. Ao mesmo tempo em que reconheço a importância de teorizar escala, eu postulo que a noção de níveis de agência fornece um instrumento heurístico mais poderoso. Tomando minha própria trajetória conceitual como exemplo, este artigo também mostra como metáforas e ferramentas interpretativas são refinadas ao longo do tempo. Na terceira e última parte, defendo o uso da noção freudiana de condensação para (re)conceitualizar os poderes heteróclitos de estruturação de diferentes níveis de agência.

 ${\it Scale, megaprojects, levels of agency, condensation.}$

Introduction

Scales are everywhere. I began to think about their different implications while I was studying megaprojects in the 1980s and 90s (Ribeiro 1985, 1987, 1994). But the question of how to think and understand scales is always open to reassessment and improvement as research and theoretical debates produce new interpretations. The current article seeks to contribute to this theoretical field with a special interest in anthropological debates and in megaprojects as highly productive scenarios to think about the issues involved. To develop my approach, I (re)consider previous key propositions on the subject. I begin, therefore, by outlining how scale has been conceived in anthropology and geography, two sister disciplines. To avoid some of the reifying tendencies of the current literature, also present in my own previous work, I advance the notion of 'levels of agency' and explain its heuristic utility, especially within the framework of megaprojects. Levels of agency help to analytically resolve the intricacies of different scales as well as their relationships and different structuring capacities. However, since reality is not experienced as analytic parts of a system but as a 'unity of the diversity' (Marx 1973, 34), I conclude by introducing the Freudian notion of 'condensation' to return to a concrete, condensed mode of looking at the multiple forces structuring our world - forces that are otherwise frequently described through the parlance of scale.

Mapping a field of debates in anthropology and elsewhere

There are various reasons why anthropologists have frequently addressed the question of scales in their studies. First, scale is an empirical fact. The human brain needs to differentiate diverse scales of space, time, size, weight, quantity, intensity, speed, temperature and complexity in order to conduct our operations and interactions in different environments. Our perceptions and diverse cognitive/interpretive capacities change according to scale. Indeed, despite its unicity and 'modularity,' 'the world works differently at different scales' (Morrison and Morrison 1982, 6). Scale can be said to be ingrained in the very existence of our species and to possess complex relationships with and effects on ecological, social, cultural, economic, psychological and political dynamics. Scale also has major heuristic implications because it functions as a perspective: in other words, depending on the scale involved, we may see, think or discover different things.

The idea that scale is polysemic, socially constructed or produced should be a truism since everything that is made or lived by humans evinces the intersubjective, social, cultural, historical and linguistic characteristics of our experiences. The socially constructed nature of categories turned the notions and variations of time and space – two major scalable categories – into a classic object of inquiry for social scientists: see, for instance, Marcel Mauss, Émile Durkheim (1971 [1903]) and E. E. Evans-Pritchard (1940).

In fact, size, its scales and effects, especially the size of populations, territories and the power of ruling groups, have been another major preoccupation present in different guises in the social sciences, even before they formally existed as such. More often than not, the relationship between scale and complexity was at the centre of interpretations. Ibn Khaldun (1332-1406), an Arab precursor of sociological and anthropological thought (Palerm 2006 [1974]), wrote on how the size of a dynasty was directly related to its power and its ability to build major cities and monuments (Khaldun 1967, 265). Centuries after Ibn Khaldun, Ferdinand Tönnies's differentiation between Gemeinschaft and Gesellschaft, first elaborated in 1887, became a classic distinction between community and society; the former mainly characterized by personal, face-to-face social interactions, while the latter was defined by the realm of indirect impersonal ties. Tönnies opened an interpretive pathway that influenced major figures such as Georg Simmel, Émile Durkheim and Max Weber, in sociology, and Robert Redfield, in anthropology. Tönnies's distinction has resonated until the present in terms such as small-scale and large-scale societies1.

In his anthropological studies in Mexico, American anthropologist Robert Redfield made use of two other dichotomies: folk and modern urban societies (1941); and little communities and industrial societies (1955). Redfield typified the folk society as 'small, isolated, nonliterate, and homogeneous, with a strong sense of group solidarity'; he saw its 'ways of living' as 'conventionalized into that coherent system which we call "a culture". In such societies 'there is no legislation, or habit or experiment and reflection for intellectual ends'. He also emphasised the 'traditional, spontaneous, uncritical, and personal' qualities of behaviour, the prevalence of kinship and of the sacred, as well as the existence of an 'economy of status rather than of the market' (Redfield 1947, 293, 307, quoted in Berreman 1978, 226).

In a critical review, Julian Steward (1956, 564) wrote that Redfield had provided a 'clear frame of reference' for 'community studies'. Redfield delineated a few main characteristics of 'little communities': distinctiveness, homogeneity, smallness and self-sufficiency. The interest in 'communities' distinguished American anthropology for decades (Macfarlane 1977) and smallness has remained, even today, a way of making sense of differences in territorial and populational sizes. Smallness, in its diverse denotations, has provided anthropologists with an entryway to examine the specificities of social assemblages other than those labelled complex, industrial, modern or developed. Furthermore, smallness has also served as a way of differentiating the implications of size scales for hierarchy, power and alterity (see, for instance, Hannerz and Gingrich 2017).

Yet despite the importance of scale in anthropology's history, the notion was usually taken for granted, a variable that seldom deserved theoretical examination. South African anthropologists Godfrey and Monica Wilson (1945) are often seen as trailblazers of the anthropological debate on scale (Berreman 1978, Weiss 1980). According to Ulf Hannerz and Andre Gingrich (2017, 3), 'they drew a rather broad-brush contrast' between the small-scale and 'the kind of social order

1 According to Eric Wolf (2001[1988]: 186), 'the entire problematic of Ferdinand Tönnies's *Gemeinschaft* und *Gesellschaft* ... still haunts sociological inquiry'.

brought by colonialism, transnational mining companies, mission schools and churches and so forth'. Andrew D. Spiegel (2018, 6473) wrote that the Wilsons analysed the effects of and responses to European colonialism 'through the prism of societal scale' and 'undermined the notion of bounded societies', challenging functionalist anthropologists. Interestingly enough, they were also pointing to a central aspect of the debate over scale in anthropology: the relationships and conflictive integrations of social units with other encompassing, powerful wholes.

Only in 1972 would Norwegian anthropologist Fredrik Barth organize a symposium dedicated to the issue of scale as the main subject. 'Scale and Social Organization' was published as an edited volume in 1978. Two relevant issues discussed were how to study 'large-scale social systems' without losing sight of real people and their life situations, and the ever more pressing theme of the effects of 'global realities' on social agents (Wolfe 1980). In the volume's conclusion, Barth argued that 'scale is a property of systems not of events and encounters. Systems are embedded in events and encounters providing the context for them' (ibid., 204). Because systems are commensurate in terms of scale, they can 'provide a framework for analysis and comparison' (Barth 1978, 259, quoted in Weiss 1980, 136).

In the same year of 1978, one of the participants in the 1972 symposium, Gerald D. Berreman, published his paper on scale to draw attention to the 'complexity and diversity of the concept' (1978, 225). Again, what was at stake was how scale affects 'the nature and quality of social interaction in societies' (ibid., 226). Berreman raised a series of questions concerning the 'scale concept' (ibid.):

Is it a matter of *size* alone ...? (If so ... where and how does one draw boundaries?) Is it a matter of *size* and intensity or closeness or pervasiveness of interaction ...? (...) Is density of settlement in a population a crucial component? (...) Is it a matter of *size* and complexity? (...) Is it a matter of *size*, density and heterogeneity of population ...? Is it a matter of extensiveness of networks of communication or of political, economic, and social organization?

Berreman's own definition of scale is 'the maximal size of the social, political, economic, and ideological-communication networks which significantly involve and affect the members of a social entity' (ibid., 228). Although ambivalent about the importance of size as an analytic tool, Berreman ends up accepting the bipolar distinction between small-scale and large-scale societies and the general qualitative differences usually attributed to them (ibid., 236-237). He thus aligned his arguments with 'the evolutionary question of differences of scale of societies', as Robert Murphy (1978, 239) wrote in his comments on the paper. A combinatory comprehension of scales, their assemblages and their empirical (inter)connections endures to the present day.

However, the discussion of scales in anthropology did not always focus on demographics as a way of contrasting 'small' and 'large' social assemblages. A significant exception existed outside the Anglo-American world. Coming from a different

angle and situated in other lineages of intellectual dialogue, French anthropologist Claude Lévi-Strauss related differences in scales to cognitive processes. In his 1962 book *La Pensée Sauvage* (first translated into English as *The Savage Mind*, 1966), he coined the expression *modèle reduit*. This notion of a 'reduced model' was wrongly and symptomatically translated into English as 'small-scale model' or sometimes as 'miniatures', missing the point that the main process at stake was the **reduction** of scale and properties. Lévi-Strauss (1966, 23) wrote:

What is the virtue of reduction either of scale or in the number or properties? It seems to result from a sort of reversal in the process of understanding. To understand a real object in its totality we always tend to work from its parts. The resistance it offers us is overcome by dividing it. Reduction in scale reverses this situation. Being smaller, the object as a whole seems less formidable. By being quantitatively diminished, it seems to us qualitatively simplified. More exactly, this quantitative transposition extends and diversifies our power over a homologue of the thing, and by means of it the latter can be grasped, assessed, and apprehended at a glance.

Lévi-Strauss also states that 'in contrast to what happens when we try to understand an object or living creature of real dimensions', in the case of reduced models 'knowledge of the whole precedes knowledge of the parts' (ibid., 23-24). He concludes that: 'the intrinsic value of a small-scale model [modèle reduit, GLR] is that it compensates for the renunciation of sensible dimensions by the acquisition of intelligible dimensions' (ibid., 24). In engineering and architecture, maquettes and other analogical miniatures are powerful reduced models that may anticipate a megastructure's characteristics or facilitate its operation.

Years later, another French scholar, Bruno Latour² (1996, 5-6), used the notion of network 'to dissolve the micro-macro-distinction that has plagued social theory from its inception', favouring instead the metaphor of connections and resonating some of the points Berreman (1978) made almost two decades before:

A network notion ... has no a priori order relation; it is not tied to the axiological myth of a top and a bottom of society; it makes absolutely no assumption whether a specific locus is macro- or micro- ... [it] is ideally suited to follow the change of scales since it does not require the analyst to partition her world with any a priori scale. Instead of having to choose between the local and the global view, the notion of network allows us to think of a global entity – a highly connected one – which remains nevertheless continuously local.

Contemporary debates in geography

Anthropology has a long history of dialogues with and borrowings from ge-

2 I thank one of the reviewers who called my attention to this text by Latour.

ography. Here it suffices to recall the influence of diffusionism in Europe and the United States, first posited by German geographers such as Friedrich Ratzel (1844-1904) and Franz Boas (1858-1942) who subsequently played a major role in the early history of US anthropology. Scale is a central and foundational notion in geography. Indeed, this is the first observation of geographer Andrew Herod in his book Scale (2011, xi), a thorough examination of the many debates, metaphors and theories involving scale in his own discipline and beyond. Herod argues and I agree – that over the last three decades globalisation has restructured the relationships between the local and national scales, causing an explosion of writings with a new vocabulary in geography, the humanities and the social sciences. He mentions 'the politics of scale', 'the production of scale', 'the construction of scale', 'scalar framing', 'scale jumping', 'scalar strategies', 'scalar restructuring', 'scalar fixes', 'scalar bending', 'rescaling' and 'descaling', 'upscaling' and 'downscaling', and the 'scale division of labor' (2011, xiii). To these I would add 'scalar hierarchies', 'scalability', 'non-scalability', 'multi-scalar' (ethnography), 'scale up' and 'scale out'. Each of these notions has its own meaning and heuristic purposes.

In Herod's book, different scales – such as the body, the urban, the regional, the national and the global - are viewed as ordering devices and as socially produced material entities that have consequences for social, cultural, political and economic life. They are presented as interconnected, in a state of flux, and as central to life under capitalism (ibid., xiv-xv). In an extensive introduction, he reviews an array of conceptions and authors with diverse theoretical orientations and contributions to the study of scales. I shall highlight the following subjects: the need for multiscalar analysis in order to understand the complexities of human and natural systems (ibid., 7 and ff); the role of capitalists in organizing different scales; scales as natural, real entities or mental contrivances; the areal representations of scales and their hierarchy, metaphorically depicted as a ladder (climbing from one level to another) or as concentric circles (moving from one circle to another) (ibid., 14); the contrast between 'the production of scale', a capital-centric approach, and 'the construction of scale', a bottom-up approach that figured scale making as the result of political struggles (ibid., 16-17); the interconnections among scales and scale jumping, i.e. the shift from one scale of agency to another in order to interfere in ongoing political processes (ibid., 19-20); the difference between a topographic view 'focused on geographical areas and [bounded] spatial echelons' and a topological view that sees scales 'not as areal units but as parts of networks' producing fusions between scales, as in the notion of the glocal (ibid., 23-24); the use of the notion of the politics of scale to refer to conflicts related to the production, contestation and (re)hierarchization of scales (ibid., 26-29).

I am particularly interested in the issues Herod raises concerning the concentric circles metaphor (moving from a local to a more distant scale) because, as we shall see, I have used this idea to think about megaprojects. It is true, as Herod claims (ibid., 46-47), that this metaphor may be instrumentally useful to think of scales as separate entities and to make a contestable hierarchy by attributing more power to the outermost encompassing scale, since most interpretations seem to

attribute more power to global forces than to local ones. He also recognizes that the concentric circles imply more a consideration of enclosure and/or encompassment than of hierarchy. Without anticipating what will be discussed later, I recognize that metaphors have their own limitations and need to be complexified by other heuristic devices. Furthermore, I posit a conceptual model that views the concentric circles not as a territorial continuum – although they sometimes may be so (when we think of the relationships between the local, the regional and the national, for instance) - but, rather, as the condensed outcome of periods and loci that are meaningful for a particular case under analysis. As for the issue of hierarchy, this also depends on what is being scrutinized and on the characteristics of the agents and agencies engaged in concrete scenarios. Sometimes local people are more capable of exerting power than global/transnational agencies, other times national agents will be in more powerful positions, and so on. Very often, the most powerful collective subjects acting in a given context are the economic and political networks and the coalitions of agents and agencies operating at different levels.

Contemporary debates in anthropology

In 2000, Marilyn Strathern published an 'ethnographic commentary on scale'. One of her concerns was to understand how an increase in quantity and intensity affected political, social, and economic processes, while some aspects of life in the New Guinea Highlands remained constant (Strathern 2013 [2000], 210). Her wish was to distinguish when scale matters and when it does not. I find her distinction between scale-sensitive and scale-insensitive processes a valuable contribution to our thinking about variation and stability. It is also a reminder that scale change does not always modify all aspects of human life and cannot be seen as the cause of every single transformation in specific ethnographic scenarios. Prior to this work, Strathern had written a more theoretical piece on scale in 1995. I shall return to the latter text in my own discussion on condensation below.

In tandem with the need to rethink scales in a globalised world, Anna Tsing's 2005 book, albeit not exactly a study of the theme per se, is often quoted when anthropologists consider the impacts of scales (see, for instance, Carr and Lempert 2016, Salazar, Elliot and Norum 2017). Tsing does call attention to scale-making and its articulations with globalist projects and makes important observations and definitions. When considering the power of finance in the contemporary world, she contends that current 'economic projects cannot limit themselves to conjuring at different scales – they must conjure the scales themselves' (2005, 57-58):

In this sense, a project that makes us imagine globality in order to see how it might succeed is one kind of 'scale-making project'; similarly, projects that make us imagine locality, or the space of regions or nations, in order to see their success are also scale-making projects. The scales they conjure come into being in part through the contingent articulations into which

they are pushed or stumble. In a world of multiple, divergent claims about scales, including multiple divergent globalisms, those global worlds that most affect us are those that manage tentatively productive linkages with other scale-making projects.

Tsing goes on to define scale as 'the spatial dimensionality necessary for a particular kind of view, whether up close or from a distance, microscopic or planetary'. More importantly, she makes clear that: (a) scales are not a 'neutral frame', they must be 'brought into being: proposed, practiced, and evaded, as well as taken for granted'; (b) scales are 'claimed and contested in cultural and political projects'; and (c) 'links among varied scale-making projects can bring each project vitality and power' (ibid., 58). Later in the book, she proposes that globalist projects come into being as APHIDS – that is, as 'articulations among partially hegemonic imagined different scales' (ibid., 76).

Tsing earlier made other contributions on these issues when she addressed, for instance, the need to pay attention to 'ideologies of scale, that is, cultural claims about locality, regionality and globality' and, in a similar vein, to the 'rhetoric of scale as well as contests over what will count as relevant scales' (Tsing 2000, 347). The author identified scale-making as a key issue in global studies and asked: 'through what social and material processes and cultural commitments do localities or globalities come, tentatively, into being? How are varied regional geographies made real?' (ibid., 348). Tsing also explored 'scalability projects from the perspective of an emergent "non-scalability theory" that pays attention to the mounting pile of ruins that scalability leaves behind' (2012, 506). Scalability is defined as 'the ability to make projects expand without changing their framing assumptions' (2015, 38), without rethinking their basic elements. And she went on to say that scalability 'banishes ... diversity that might change things' (2015, 38).

Yet Tsing's argument that theoreticians should turn their attention to the 'non-scalable project elements' (roughly translatable as the non-hegemonic or sub-altern participants included in an expansionist project and the environment it destroys) 'as objects for description but also as incitements to theory' (ibid) down-plays a long history of critical theories, approaches and practices in the social sciences and anthropology. I agree with E. Summerson Carr and Michael Lempert (2016, 19) when they identified in Tsing's 2015 work

a tendency to discern something dehumanizing – even violent – about scale, perhaps because of its association with measurement and ordination, on the one hand, and vertical power arrangements, on the other. But ... scaling projects can flatten hierarchies as well as construct and maintain them. (...) So while we must be ever alert to the ways that scalar logics limit our imagination of passable human terrain, we should remember that precisely because scaling is inherently perspectival and relational, it is also potentially transformative and humane.

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In Tsing's trajectory, scale and its derivatives have become a reified substitute for agency and power. Scale seems to substitute for power differences, for different capacities of intervention by a plurality of social agents and agencies anchored in and acting at different levels of agency. In fact, I would prefer a more concrete notion than scale-making or APHIDS to conceptualise the collective subjects engaged in political conflicts and operating from diverse positions that empower them to act at global, national or local levels. Dealing with these more concrete social entities is especially useful if a researcher is interested, as Tsing claims to be, in making ethnographies of global connections. I am not really convinced that formulating a notion like 'nonscalability' is the best way to deal with disorganising, disturbing and resisting forces. In most conflicts people are not really struggling against scale; more often than not, they are being forcibly included or are already absorbed in much larger worlds and systems beyond their command. They are struggling against the destruction of their lifeways, ecologies and autonomies, against their incorporation or consolidation as subalterns by powerful elites that may use scale as a legitimating discourse but resort to sheer physical or symbolic violence with no metaphor of hierarchy involved, neither in 'scalar parlance' nor in 'scalar pragmatism'.

I conclude this section by turning to the book edited by linguistic anthropologists Carr and Lempert (2016) on the pragmatics of scale. I see this work as one of the most representative studies of scale from an anthropological point of view. Their principal contribution lies in looking at scaling as an

inherently relational and comparative endeavor ... [that may] connect and even conflate what is geographically, geopolitically, temporally, or morally 'near' while simultaneously distinguishing that nearness from that which is 'far'. Similarly, scaled hierarchies are the effects of efforts to sort, group, and categorize many things, people, and qualities in terms of relative degrees of elevation or centrality (2016, 3).

The authors emphasize that people are not 'simply subject to preestablished scales', they can also 'defy the scalar formations they confront in social life' (2016, 3) by way of what geographer Neil Smith (1992, 2004) called scale-jumping and scale-bending. Carr and Lempert urge us to go beyond the 'micro-macro standoff' and to avoid the tendency to 'ontologize scalar perspectives' (2016, 8). Here, they choose to pay 'special attention to the semiotic means by which social actors and analysts scale our worlds' in order to show 'how scale is a practice and process before it is product' (ibid., 8-9). Their interest in pragmatics leads them to understand scales as 'ways of seeing and standing in the world' (ibid., 10), and therefore as 'instruments for political, ritual, professional, and everyday action'. Their aim is to understand 'how scales are assembled, made recognizable, and stabilized through various communicative practices'. The authors

give empirical attention to how bodies, technologies, commodities, com-

munities, ecologies, and built environments afford scalar practices and impose limits on those who try to scale them, while nevertheless appreciating that anything can be made big, brought near, or perched atop a hierarchy (ibid., 10).

I find particularly illuminating the book's interest in the institutionalization of scalar perspectives, a process that ensures that 'some scalar projects are relatively more effective and durable', and in 'the ways that some scalar logics claim a sovereign vision' (ibid., 14). Finally, Carr and Lempert remind us that scales can allow ranking and classification, are capable of being combined, and that 'social existence is radically scalable' (ibid., 18).

Megaprojects: moving from scale to levels of agency

The scales of megaprojects turn them into extreme planned interventions in the natural and social worlds. My research experience on the construction of Brasilia, carried out while I was an MA student on the Graduate Program in Social Anthropology of the University of Brasilia (Ribeiro 1980, 2021), led me to characterize megaprojects as a recurrent form of production (Ribeiro 1985, 1987). In the 1980s and 90s, my work was closely related to an emerging critique of so-called 'development projects' and their negative impacts on local populations. This was a period when anthropologists were involved with debates on 'sustainable development' and in political actions undertaken in collaboration with NGOs, as well as with or against global institutions like the World Bank. I myself – later accompanied by other colleagues in Brasilia, such as Paul Little and Henyo Trindade Barreto Filho – engaged with environmental struggles to defend the environment and peoples in Amazonia and elsewhere.

By definition, megaprojects bring together local and supra-local scales. At the time, I emphasized that, among other factors, they are linked to the expansion of economic systems and that their construction is meant to connect 'isolated' areas to pre-existing capital flows and networks, transforming these areas into new fragmented spaces of the capitalist world system³. Their gigantism is directly related to the discussion of scale in this paper. The term refers not only to the enormous complexity and physical size of the works but also to the vast amounts of capital, labour and materials mobilized to construct them. It also points to the extensive networks of public officials, politicians, financial and industrial corporations, professionals and technicians these megaprojects require. The size of the capital and the infrastructure, such as worker camps, needed to keep and manage a huge male labour force over the years of construction, imply complex articulations between several dispersed sources of financial and fixed capitals. These, in turn, call for different types of political, juridical, technical, logistic and operational capabilities that usually only large corporations possess. At the same time, it is impossible to address the topic of megaprojects without considering another characteristic related to their size: the impacts they cause on the environment and on pre-ex-

³ I was encouraged to revisit my interpretations of large-scale projects by Susann Baez Ullberg and Gabriella Körling, who invited me to give the keynote speech at the 'Symposium Ethnographies of Megaprojects: social and political worlds of large-scale infrastructures', organized by them at Stockholm University in September 2019. The symposium also inspired the present article.

isting social, cultural, economic and political systems at local, regional, national and sometimes international levels.

Megaprojects imbricate local, regional, national, international and transnational 'levels of integration' – a notion I borrowed from Julian Steward (1955). To counterbalance the limits of Steward's conception, which sought to comprehend the relationships between communities and the nation, I also considered Eric Wolf's (1982) perspective concerning the 'interconnections' of many loci within an evolving global capitalist mode of production. Furthermore, my study of the presence of transnational capitalist interests – and especially of a transnational technical elite in the construction of the Yacyreta Hydroelectric Dam (Ribeiro 1994) – made it mandatory to consider the 'transnational level of integration' and to distinguish the different powers of structuration that the diverse levels evinced in the making of a transnational identity, namely that of the *bichos-de-obras*, the participants in the global migratory circuits of megaprojects.

As a consequence, later, when I discussed 'the condition of transnationality', I was particularly interested in building a conceptual framework that could 'correlate individual and collective agents to different sociocultural-spatial units with variegated territorial and institutional expressions' (Ribeiro 2003, 63). To provide a simple and elegant representation of this concept, I drew from Evans-Pritchard's (1969 [1940], 114) diagram of Nuer socio-spatial categories and designed a figure of concentric circles, a rather common metaphor of relationships between scales (Herod 2011), with the local at the centre and other levels expanding outwards to the international level of integration. My diagram was singular in two ways: it was drawn with dotted lines to signal the open and fluid relationships among the levels and included a transversal axis that cut across all the circles and represented the transnational level (see Figure 1). I wished to depict the transnational level in this way to indicate how it was present in all the others and to make clear it did not have a spatial reality that could be conceived within the frame of an increasingly

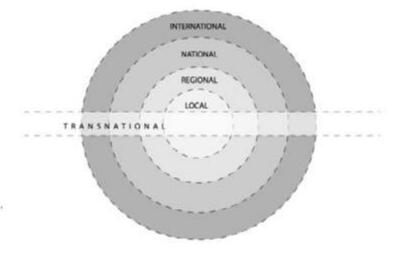


Figure 1: levels of social agency

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territorial encompassing order.

This conceptual formulation proved to be productive to think about megaprojects and the transnational identities they generate (Ribeiro 1995), as well as the interplay of levels under transnational capitalism in general (Ribeiro 2003). It was

also useful for several graduate students who worked with me at the University of Brasilia (see, for instance, Albuquerque de Moraes 2019, Souza 2016, Santos 2013, Medeiros 2012, Diaz Crovetto 2010, Sousa 2006, Pareschi 2002, Little 1996). However, the concept requires improvements. First, today, instead of levels of integration, I would rather call them levels of agency. I prefer to avoid the optimistic connotations that 'integration' seems to trigger, prompting the imagining of harmonious insertions and relationships among the levels and thus obfuscating their tensions and conflicts. Second, I wish to reduce the emphasis on territoriality implied by the concentric metaphor in order to stress the roles of agents, networks and agencies within each level and across inter-level relations. In fact, the expression 'levels of agency' is also useful to make a case that at each level agents have distinct capacities and degrees of empowerment to interfere in the processes that have brought them together in specific scenarios and processes.

My usage of 'agency' goes back to Anthony Gidden's theoretical efforts (Giddens 1984). While I value the simplicity of his definition – agency refers to people's capabilities of doing things (ibid., 9) – I believe that he overemphasizes the actions and (un)intentions of individuals. At the same time, when he discusses the relations between agency and power, Giddens stresses the capacity for intervening 'in the world, or to refrain from such intervention, with the effect of influencing a specific process or state of affairs' (ibid., 14). However, I also argue the need to include three modalities of power defined by Wolf (1999, 5). First, what he calls Weberian power, 'the ability of an *ego* to impose its will in social action upon an *alter*'; second, tactical or organizational power, i.e. a modality that 'controls the contexts in which people exhibit their capabilities and interact with others'; and, finally, structural power, 'the power manifest in relationships that not only operates within settings and domains but also organizes and orchestrates the settings themselves, and that specifies the direction and distribution of energy flows' (ibid).

I thus see levels of agency as an analytic notion that supposes the existence of different real or virtual encounters and processes related to the capabilities of persons or organized collectivities (political, economic, ethnic or religious networks or institutions, for instance) for intervening, from different localities and power positions, in different processes over time. The above-mentioned power modalities, including Gidden's, crosscut all levels of agency. In concrete ethnographic scenarios, their relations may result in different capacities for structuring the outcomes of processes.

Local, regional, national, international and transnational levels of agency

The local level of agency is not an empirically-bounded territory such as a 'little community' or a 'small-scale society', the frontiers of which an ethnographer could presumably trace. Rather, it is a set of loci and networks – households, schools, workplaces, churches, leisure places, state offices and authorities, groups of relatives, colleagues and friends, for instance – that most of the time are phenomenologically experienced by way of virtual and real quotidian interactions

with meaningful others, places and things. This is where everyday life unfolds. We are all locals; most of the time our lives occur in foreseeable places and networks.

Megaprojects are often affected by the physical characteristics of the territories where they are emplaced. This is the case of hydroelectric dams and canals, for example. Planned cities are also built in appropriate terrains. Megaprojects structure their own sense of locality by intervening in an area and its interconnections, adapting them to their functional needs and interests. They radically fuse residential and work activities that unfold in a setting dominated by various corporations articulated in consortia. Daily life in worker camps reflects the hierarchy of the industrial branches involved in the projects, represented by transnational, national and regional corporations, and is subsumed to project goals. Capital creates a space and social realm in its own image, in modes similar to Erving Goffman's notion of 'total institutions' (Goffman 1974). Life in camps even generates specific identities like the transnational *bichos-de-obras* I met at the Yacyreta working site (Ribeiro 1995), that is, people whose lives develop within the global migratory circuits of megaprojects, structured by major civil engineering corporations from their world headquarters (see below).

Localities are always enmeshed within larger systems and the first empirical system encompassing the local corresponds to what I call the regional level of agency. My definition of a region is not exclusively ecological or geographical; rather, it includes historical, political and cultural features. I am referring to areas existing within nation-states such as New England in the United States, Catalonia in Spain, or Patagonia in Argentina. Regional levels of agency are more of an imagined abstraction than the local one, and this is true of every other more encompassing level. The further we travel from the local level, the more abstract and stereotyped the representations of the levels of agency become (it is one thing to say you are from Sicily, another to say you are Italian or European). In fact, agents know what the regional level is, how it differs from others, and how it potentially corresponds to authorities with a certain legal power and enforcement capacity. Megaprojects always represent interventions in regional systems; they change the flows of people, commodities, capital and information within a region, as well as the hierarchies between different pre-existing areas/regions and economic activities. Mega construction works may recruit local people to the lower levels of their labour markets, but also workers from different regions within a country. They may also involve local and regional capitalist firms and entrepreneurs as food and service providers, for instance. Their environmental impacts typically go beyond the local level, affecting different areas in a region.

Regions exist within the national level of agency, a level characterized by a strong and powerful institutional existence. This level is directly related to the historical emergence of the nation-state as the preferential mode of managing the relationships between large territories, populations, economics, culture, politics and power. National authorities based on the notion of sovereignty overrule local and regional powers and establish themselves as the sole legitimate entity vis-à-vis other nation-states, immediately triggering the existence of international relations

and systems. This might be the reason why students of scale-making stress the power of the national level over others. Indeed, the nation-state and its institutions convey a clear sense of the level's existence since they interfere in and organize life at the local and regional levels, actively build ideologies of national membership, as well as represent their 'citizens' in international arenas.

The economic and political importance of megaprojects often turns them into a matter of national concern or a national initiative. They can be intended to change the regional configuration of a nation-state, such as the construction of a new federal capital like Washington (United States) in the nineteenth century, or Brasilia (Brazil) and Abuja (Nigeria) in the twentieth century. They may also be a means to explore vital national and international 'economic resources', or to interfere in the flows of people, commodities and energy, as exemplified by huge dams producing hydroelectricity or the Suez and Panama Canals. The authorities, politicians and technicians of nation-states may be directly involved in the financial, juridical and administrative arrangements required to set up a project, as well as in the negotiations and bidding processes that establish the juridical and technical contours of a project and its main participants. In any case, megaprojects must abide by national laws on legal contracts, bidding, financing, the labour force and the environment.

The inter-national and trans-national levels of agency are also directly related to the national scale, as the suffix national indicates. Megaprojects like the Suez and Panama Canals, with their huge impact on global flows of people and commodities, combine all the previous levels. Indeed, their existence cannot be understood without the combination of local, regional, national and international factors. Suez was a French corporate project built in a Middle Eastern desert (1859-1869) while Egypt was under the hegemony of the British Empire. The Panama Canal (1904-1914) was built in a tropical area of Central America by the US Corps of Engineers and Caribbean workers, after the United States separated Panama from Colombia and created an 'independent' nation-state and the Canal Zone as an unincorporated area that remained under American control from 1903 to 1999. Panama is a clear example of how a megaproject may reflect the (geo)political imperial interests of a nation-state.

A major hydroelectric dam such as Yacyreta is also an example of the coexistence of all levels of social agency, including the transnational level. It illustrates the fact that megaprojects may create international territories. The Paraná river is an international waterway shared by Argentina and Paraguay. Consequently, the Yacyreta's construction site was a binational area established by a treaty between the two nation-states. Among other conditions, the treaty stipulated that the project's labour force should be made up of Argentinian and Paraguayan workers. At the same time, the international financing scheme, overseen by the World Bank, entailed international bidding processes open to major global corporations. Eximbanks (public entities involved in fostering and financing national foreign trade) backed bidders from their countries to help them win the project's largest contracts, namely those pertaining to the main civil works and the electro-mechanical

equipment. An Italian corporation, leading a consortium of 32 corporations (most of them Argentinian and Paraguayan), won the construction bidding process. The fact that major European firms were involved in the consortium was reflected at the megaproject's local level of agency. More than 100 Italian nationals and a dozen of Germans and French (several with their families) lived on worker camps on the Argentinian shore of the Parana River. Many of these highly qualified engineers and technicians are *bichos-de-obras*, inhabitants of the small villages of the world system structured by multinational industrial capital, and no longer saw themselves as Italians. I met people who were third-generation participants in the migratory transnational circuits of megaprojects controlled by the global head-quarters of the Italian corporation for which they worked. Many of these workers were married to non-European women and had bi-national children. They said they were 'neither meat, nor fish'; they were gypsies, citizens of the world, a truly transnational identity structured by multinational capital (Ribeiro 1995).

A particularly important articulation between the levels was effected by the consortia. I coined the term 'consortiation' to describe the process through which legal, political, economic, social and technical institutions and networks combine agents and agencies - with different power capacities - anchored in local, regional, national, international and transnational levels of agencies. In Yacyreta, consortiation meant, for instance, the participation of local and regional agents/ agencies that provided unskilled labour either for the construction project or for the reproduction of daily life in the worker camps. It also meant the presence of powerful national Argentinian industrial corporations – including a major cement producer - and the intervention of international institutions such as the World Bank or transnational professionals such as the aforementioned bichos-de-obra. A word about the 'transnational level of agency' specifically. As Figure 1 shows, the transnational level is better conceived as a transversal axis, indicating that while its power of structuration can be felt at all levels, it lacks a territory that can be properly defined as its own. At the same time, transnational sovereign authorities are non-existent.

Depending on the level under scrutiny, a researcher may see different facets or distinct paradoxes, something that indicates the condensed character of levels of agency. From the perspective of the local level of agency, megaproject worker camps resemble small villages, meaning that in these residential areas most people know each other. However, the on-site project elite is cosmopolitan and engaged in global ideological and consumption circuits. From regional, national, international and transnational perspectives, megaprojects appear like large impersonal entities due to the size of their physical interventions, environmental impacts, labour forces and capital, as well as the complexities of their financial, technical and political arrangements.

Condensation: beyond the concentric circles metaphor

Although the concentric circles metaphor provides a powerful interpretive

tool, it also has a few limitations. As in most analytic models, the main problem lies in how to conceive the relationships between its constitutive parts. It is not, for example, entirely correct to imply that the levels of agency are nested within each other in encompassing circles as the metaphor suggests. This is especially true in the digital age when the internet has dissolved the physical boundaries between places and generated what I have called the 'virtual public space' (Ribeiro 2003a). At the same time, the exceptional representation of the transnational level – as a transversal axis - is a clear indication of the model's limitations. Furthermore, the model seems to establish hierarchical relations between the levels and gives the impression that a correlation necessarily exists between the size of territory and the power of representatives at a certain level of agency. Notwithstanding the fact that national authorities, for instance, may have more power than local ones, this correlation between territorial size and power goes against perceiving local agents as major power players with great capacities of intervention in specific settings. Concurrently, the overemphasis on space fails to do justice to the importance of variations in time when it comes to understanding, say, the changing capabilities agents/agencies located at any level of agency have to interfere in processes at decisive moments.

If we are dealing with nested hierarchies of levels of agency that can be manipulated and subverted by diverse subjects at different junctures, then the understanding of any level of this continuum depends on its own peculiarities as well as on its relationships with other subjects pertaining to different levels. Such an understanding also needs to take into account the concrete sociological, political and historical contexts of the levels of agency and the fact that agents and agencies may have contradictory forms of interplay and behaviours. Such a conception has methodological implications: it calls for ethnographies that can grasp the relationships among levels of agency. In the history of US anthropology, such considerations can be traced back to Eric Wolf who, in 1956, saw 'communities and national institutions' as 'components of an encompassing web of relations' and called for the study of brokers, social agents who acted as middlemen between 'larger systems' and people enmeshed in local life (Wolf 2001 [1956])⁴. Decades later when anthropologists became involved in the growing field of globalisation studies, George Marcus presented his influential notion of multi-sited ethnography that would be redubbed 'multi-scalar ethnography' by scholars already influenced by the field of debates on scale (Xiang 2013). Marcus (1995) wanted to emphasize the 'continued value of participant observation but covering a greater range of sites' as an 'ethnographic approach to the capitalist world system' (Forte 2018, 2045-2046). The call for multi-sited ethnography, glocal ethnography (Salazar 2010) and multi-scalar ethnography also indicates the need for nexuses between ethnographic/anthropological achievements and imaginations with other diverse disciplinary achievements and imaginations, such as those of sociology, history, geography, economics, philosophy and literary analysis, which are not so heavily bounded by the ethnographic methodological imperative and which allow us to include non-local agents and agencies as well as different historical junctures by

⁴ One of the reviewers reminded me that in Brazil in the 1940s and 50s, at the University of São Paulo, sociologists already fostered a vision of particular loci as parts of wider systems. The reviewer also pointed out that Roberto Cardoso de Oliveira's notion of 'interethnic friction' (Oliveira 1963) called for an integrated perspective that joined the local and the supralocal.

way of other heuristics.

This need is related to the condensed character of levels of agency, a way of going beyond the limitations of the concentric circles metaphor as an analytic model. Students of globalisation have dealt with this problem before. The notion of assemblages, as developed by Saskia Sassen (2006), is one such tool for understanding the complexities of heteroclite compositions of places, periods, agencies, agents and networks. However useful it may be, though, it remains an excessively analytic endeavour, meaning that its metaphorical resonances remain caught in the part/whole relational universe of analysis and seldom manages to surpass it. To posit, as I did, that the boundaries between different levels of agency are porous is not enough either. Although it reduces the idea of bounded contexts of analysis, it still keeps the boundaries in place and gives the impression that the relationships between different scales are always logical and not haphazardly and contradictorily related to an enormous range of human and non-human agents and agencies that act within and across the different levels of agency. In sum, the relationships among levels need to be seen as heteroclite and condensed. And this is where the well-arranged, analytic and elegantly apprehensible metaphor of concentric circles with its propensity to reification clearly reaches its limits.

This is the moment to move beyond the combinatory metaphors commonly used when scales are involved and to explore what I call the condensed character of the relationships between different levels of agency. Here I am inspired by Sigmund Freud's notion of condensation (see, for instance, his 1913 [1899] work The Interpretation of Dreams). Simply put, the work of condensation indicates that the analyst must be capable of interpreting a heteroclite, fragmented unit of signification that appears unintelligible because its components are connected to various actions and meanings that may have unfolded in a large number of contexts and time frames. By analogy, the condensed character of levels of agency means that, first, there are no borders, permeable or otherwise, among them. Second, everything under scrutiny has been structured by a large number of relationships both internal and external to different levels of agency - relationships happening at different moments in time and that suppose different power capabilities of agents and agencies, potentially or actually located in a many distinct loci. Third, efforts to think in terms of local, regional, national, international levels are analytic exercises whose validity must be complemented by holistic interpretations that take condensations into account. In a megaproject such as Yacyreta, condensation demands that we consider the project's political and institutional history at all levels of agency, as well as identify and differentiate the relevant agents/ agencies that became central to the making of the construction project over time, thereby structuring the complex scenario that the ethnographer experiences in a condensed fashion during her/his field research.

In fact, I see condensation as a metaphor for how we experience life itself. Everything comes together and is perceived in a moment, or in a sequence, in all its oneness and diversity. To discern this complex synthesis, the analyst distinguishes – in what seems to be solid and unique experiences – differences, components and

forces, and discerns the multiplicity of factors simultaneously present that render all these (inter)connected parts as a sensory unity. By appealing to condensation as a heuristic tool, I am leaving behind the analytic scenario (pre)supposed by scales and levels in order to return to the concrete, the 'concentration of many determinations, hence the unity of the diverse' (Marx 1973, 34). Condensation calls attention to heterogeneity and homogeneity simultaneously, and while it allows us to recognize them, it dissolves the large-scale/small-scale dichotomy, as well as the distinction between past and present (in fact, macro and micro, as well as past and present, are always actualised in any single moment). It also dissolves the distinction between scale-sensitive and scale-insensitive processes (Strathern 2000 [2013]); that is, experiences in which quantities and intensities cause perceptible changes and those in which they do not, in which constants cut across scales. In this sense, it is a hyper-real present full of pasts and futures, a kind of hologram - or better, a holographic phenomenon, as Strathern (1999) defines it, containing 'in every part ... information about the whole and information about the whole being enfolded in each part' (ibid., 17-18). Strathern adds that 'it is a holographic effect to imagine one can make connections anywhere' (ibid., 18). Condensation comes after the analytic and relational work; it metaphorizes the experience of the real and reinstitutes it as a holistic totality in the mind.

By way of conclusion

Scales are constructs that help us think about the diverse physical, historical and sociological characteristics and processes that shape our worlds. In this article I summarized long-standing usages of scale as a metaphor/heuristic in the social sciences in general and anthropology in particular. I pointed to a reifying tendency in this universe and endeavoured to resolve this problem by presenting a new notion (levels of agency) and by considering the need to always return to the concrete after the analytic effort is complete (condensation). I used megaprojects as the most appropriate framework to show how the notion of 'levels of agency' facilitates our approximations to seemingly chaotic contexts and how it usefully orders them. Levels of agency indicate different power capabilities - in other words, different possibilities for inducing changes in processes that affect people's lives according to the locations of agents and their hierarchical capacities to draw on resources. They are heuristic devices to tackle the complexity of the condensed relations and the (inter)connections that a researcher is required to interpret in different scenarios. They are of important consideration in any social inquiry but need to be taken together with other renderings and with a conceptual toolbox composed of various other notions and concepts historically developed by the social sciences and the humanities. A final movement is therefore needed to reconstruct the totality that Marx (1973, 34) called 'the unity of the diverse'. Here the role of the Freudian notion of 'condensation' is decisive since it calls attention to: (1) the need to understand the seemingly chaotic heteroclite universe as a composition made up of multiples agents and agencies operating from a multitude of

places and times, a multiplicity temporarily broken by the interpreter into analytic parts; and (2) the necessary consideration of different theories, methodologies, interpretive perspectives and levels of abstraction that allow us to comprehend and explain the changing formations and complexities of social realities.

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