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Useful(filling) Durkheim: Reconfiguring the Urban Morphological Contribution of Space Syntax

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Abstract: As early as in *The Social Logic of Space*, Bill Hillier and Julienne Hanson emphasized the theoretical affinity between sociology and the urban morphological approach of space syntax. Taking Émile Durkheim's classic concept of social morphology as their analytical starting point, they established an operational methodology with the prospect of analyzing the hitherto undertheorized relationship between society and spatiality. In this Durkheimian light, it is obtrusive how silent sociology has been in response to the space syntax approach, its path breaking analytical potentials, and empirical results. However, we are dealing with a silence that is analytically injurious to both space syntax and sociology: while the latter overlooks the space syntax's original contribution to a genuinely neo-Durkheimian theory of urban morphology, the former loses a valuable interlocutor who potentially could clarify the way space syntax is embedding urban social life in morphological space. Thus, it is this dual problem caused by the silence of sociology that the current paper is a contribution to transcend. First, the paper revisits Durkheim's social morphology and discusses the space syntax's distinct methodological operationalization and application of the social morphology. Second, the paper attempts to develop an urban theoretical framework that integrates, on the one hand, space syntax's urban morphological insights, and, on the other hand, Randall Collins' contemporary developments of a micro-morphologically founded sociology of interaction rituals.

Keywords: Émile Durkheim; social and urban morphology; space syntax; interaction rituals

The Durkheimians take us into the jungle;
only the jungle is ourselves, and we never
escape from it (Collins 1994: 181).

Lost by Sociology, Found by Space Syntax

It must be considered as extraordinarily foresighted that Foucault already in 1967 declared: “[t]he present epoch will perhaps be above all the epoch of space.” (Foucault 1998: 229). As predicted, the interest in spatial themes and theories has grown rapidly ever since. Some are even arguing that we currently are facing a ‘spatial turn’ of the human and social sciences, not at least understood as a turning *away* from the ‘linguistic turn’ which during the last four decades has dissolved any spatiality in discursive representations (Warf and Arias 2009; Thrift 2008). Sociology is decidedly involved in this spatial turn, and thus it is increasingly common to hear the claim that space is a hitherto neglected aspect of society. Accordingly, space is a *new* dimension of sociology. However, following Tonboe’s (1993) systematical reading of the classic sociological literature, one has to be skeptical about this spatial conclusion regarding sociology: rather than a ‘new’ dimension, space is a partially *forgotten* dimension of sociology given that all of the founding fathers of sociology – Marx, Weber, Simmel and Durkheim – understood modern society in the context of space. Thus, it is more accurate to characterize ‘space’ as a dimension which has been “lost and found” (Tonboe 1993: 524): space is by no means a new dimension of sociology invented by the current spatial turn. Rather than anything else, the spatial turn proves the existence of a selective theoretical memory given that the references to and applications of the classical sociology’s considerations on space is virtually absent. To the extent that the spatial dimension is recalled, there is as striking neglect of the classics who established and constituted this dimension in the early phase of sociology. The spatial turn floats in a spatial vacuum; the current theoretical discussion is disengaged from its historical foundations.

This historical neglect is most evident in relation to the perhaps most important of the founding fathers of sociology, Émile Durkheim, whose concept of ‘social morphology’ marked him as the classic sociologist with the most well-developed understanding of space (cf. e.g. Durkheim 1978a; 1978b; 1982; 1960: 360; 1963). With few exceptions, the concept of social morphology has, however, been systematically neglected by contemporary sociology: this is the case both in specific discussions on the spatial turn (e.g. Warf and Arias 2009) as well as in the more general interpretations of Durkheim’s sociological contribution (e.g. Alexander 2005: 147; Lukes 1973). In this theory historical light, it is noteworthy that Hillier and Hanson (1984) in *The Social Logic of Space* explicitly returned to Durkheim and the social morphology in their establishment of the ‘space syntax’ theory of the relationship between space and society. Thus, when it comes to Durkheim’s social morphology, Hillier and Hanson (1984) made a pivotal contribution to rediscover what sociology has been, and now has forgotten. It is this fact that has led us into the current paradoxical situation where Hillier and Hanson’s architectural theoretical contribution, when it comes to the social morphology, is more Durkheimian than contemporary urban sociology. Current paper is a contribution to transcend this paradoxical asymmetry: while sociology, on the one hand, undoubtedly could benefit from being confronted by this revitalized version of Durkheim’s social morphology the space syntax paradigm, on the other hand, could sharpen its sociological fantasy in a critical dialogue with sociology. Following my educational background as a sociologist, the paper is, on a general level, to be understood as an attempt to reintroduce space syntax’s spatially reassessed version of the social morphology to sociology while the paper as regards to the specific discussions is a systematic sociological examination of space syntax. Thus, the objective is to expose the space syntax paradigm, especially in Hillier and Hanson’s (1984) principal formulation, to a constructive sociological and (neo-)Durkheimian critique. To my knowledge, nobody in the literature has attempted this before.

The paper will proceed as follows: *first*, the paper identifies the nature and potential problems of Hillier and Hanson's (1984) reception of Durkheim. It is argued that their argument is strained by an analytical gap between, on the one hand, the space syntax's micro-methodological focus, and, on the other hand, a reception which follows the Durkheimian 'macro-wing', that is, the macro-sociological and functionalist interpretation of Durkheim. *Second*, the paper attempts to overcome this analytical gap by developing a theoretical and operational theory of the spatially embedded urban ritual consisting of a synthetization of the micro-methodological insights of the space syntax approach and Randall Collins' neo-Durkheimian micro-sociology of interaction rituals. This theoretical approach is, furthermore, exemplified with the case of *Dronning Louises bro* in Copenhagen. Thus, it is suggested that the Durkheimian promise of space syntax is to be realized by a closer integration with the Durkheimian 'micro-wing'.

Spatializing the Material Substratum

Initially, the paper will elaborate on the paradigmatic formulation of space syntax as Hillier and Hanson (1984) presented it in *The Social Logic of Space*. As the title indicates we are dealing with a theoretical and methodological attempt to conceptualize the 'society-space relation'. Thus, the goal is to understand "(...) how spatial pattern can, and does, in itself carry social information and content." (Hillier and Hanson 1984: xi). Already in this declaration of intent, the sociological perspective is evident: space is not an empty container, but a societal crystallization with a social content. In this sense, space has an 'inherent' or 'underlying' social logic. However, the problem is the non-existence of a paradigm dedicated to study the society-space relation. Both within architectural theory, which is Hillier and Hanson's academic background, and more generally within the human and social sciences, the situation is rather a paradigmatic denial of the actual relationship: "The paradigm in effect conceptualizes space as being without social content and society without spatial content. Yet neither can be the case, if there is a lawful relation between them." (Hillier and Hanson 1984: x). It is precisely this conceptual deficit that leads Hillier and Hanson (1984: 4, 18, 22, 220, 269, 274) to Durkheim and social morphological laws outlined in *The Social Division of Labor* – a Durkheimian reference which afterwards has become obligatory in the space syntax literature (cf. e.g. Hillier and Raford 2010; Hanson 1998: 192; Marcus and Legeby 2012). According to Hillier and Hanson, Durkheim's concept of space offered a unique vocabulary for conceptualizing the society-space relation:

This theory was profoundly spatial: organic solidarity required an integrated a dense space, whereas mechanical solidarity preferred a segregated and dispersed space. Not only this, but Durkheim actually located the cause of the different solidarities in the spatial variables, namely the size and density of populations. In the work of Durkheim, we found the missing component of a theory of space, in the form of the elements for a spatial analysis of social formations. *But* to develop these initial ideas into a social theory of space, we had to go back once again into the foundations, and consider the sociology of the simplest spatial structure we had found useful to consider: the elementary cell (Hillier and Hanson 1984: 18, my italics).

At first glance, Hillier and Hanson seem utterly loyal to Durkheim's original argument: it is the spatial variables volume and density of the population that is the cause of the two types of solidarity. It is, accordingly, this spatial theory that Hillier and Hanson apply (cf. e.g. Netto 2007). However, such an interpretation risks overlooking that Hillier and Hanson's reception is anything but a one-to-one reproduction of Durkheim. Rather, their reception has to be characterized as a genuine reformulation of the social morphology. In identifying this, we have to hold on to the small but crucial 'but' that Hillier and Hanson add to their tribute to Durkheim: it is necessary to scrutinize the 'foundations' anew, that is, the unexplored spatialities of

Durkheim's original material substratum. In my interpretation, Hillier and Hanson suggest a fundamental solution to the theoretical vagueness that Durkheim's, otherwise extraordinarily systematic, social morphological reasoning has left us with. Thus, Hillier and Hanson's 'but' instigates a spatial change of perspective. To put it in a nutshell, the problem is that the dynamic density – which Durkheim points out as the principal cause of the moving power any historical progress – remains *in itself* causally unexplained, that is: if everything takes place mechanically, as Durkheim told us, what sort of morphological machine densifies social life? The dynamic density that should have served as the positive causal explanation, *explanans*, of the varied types of solidarity, *explandandum*, ends up in an *infinite regress*: Durkheim fails to explain the origins of the dynamic density and thus this fundamental question is displaced into theoretical uncertainty. In this light, the material substratum that should give his sociological endeavor a positive or solid foundation appears eroded. Evidence suggests that Durkheim was painfully aware of this analytical omission for which reason he referred the problem to a footnote in *The Division of Labor in Society*:

We do not here have to look to see if the fact which determines the progress of division of labor and civilization, growth in social mass and density, explains itself automatically (...). We content ourselves with stating this law of gravitation in the social world without going any farther (Durkheim 1963: 339).

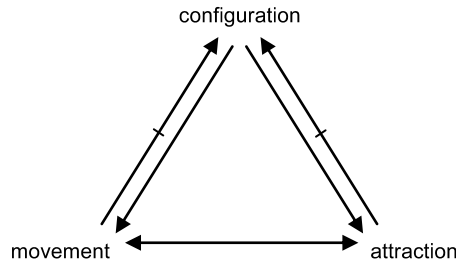
Indubitably, it is a peculiarity that Durkheim left something as theoretically grandiose as the 'law of gravitation in the social world' unexamined. An examination he, furthermore, did not initiate elsewhere or later in his writings. Taking Durkheim's aspiration to establish sociology as a positive science into account, this non-explanation of the dynamic density, must have been an unsatisfactory for Durkheim: the dynamic density functions *de facto* as a meta-physical ontology or an analytical 'black box', in his sociological framework. I suggest that this situation was against Durkheim's will, and thus indicates that he simply failed to penetrate the ontological core and source of the dynamic density. In concordance with this interpretation, the Durkheimian originality of Hillier and Hanson is precisely the theoretical attempt to open the black box of dynamic density: the endeavor to 'go back once again into the foundations', as we quoted it above, is to be understood as a theoretical attempt to consolidate the spatial foundations of Durkheim's material substratum. Thus, Hillier and Hanson paves the analytical way to stop the *infinite regress*, that is, to investigate how the dynamic density does not come from nothing, but, on the contrary, is conditional on morphological space.

With this spatial morphological reformulation or spatialization of Durkheim's original social morphology, the analytical perspective is shifted towards the spatial 'boundaries' whose properties and origin he did not elaborate, but which Hillier and Hanson reassess as the fundamental boundary of the elementary cell that defines the analytical object of the space syntax paradigm: "(...) the empty volume of space" (Hillier and Hanson 1984: 1). In relation to Durkheim's missing explanation of the source of the dynamic density it is crucial how this spatio-morphological re-founding of the material substratum has made possible the, perhaps, single most important empirical result of the space syntax paradigm, that is, how "(...) the fundamental correlate of the spatial configuration is movement." (Hillier 1996: 113). As it has been proven in innumerable space syntax studies (cf. especially Hillier *et al.* 1993), the inherent social logic of space is, essentially, constituted by the empirical facts that the urban 'movement economy' is primarily caused by and thus has to be explained by the configurational properties of morphological space itself. Paraphrasing Hillier (1996), it is space which is the 'machine' that dynamically densifies and, in this capacity, is the explaining cause of movement and the dynamic density, which Durkheim never managed to explain causally. As a consequence of a too spatially disembodied understanding of movement and density, Durkheim missed that movement and density does not just 'occur', but essentially is a mediated product of space: "By necessity, all these causes, as well as all

these effects, occur in the form of movement.” (Durkheim 1960: 361). Thus, Hillier and Hanson’s principal corrective to Durkheim’s social morphology is their systematic spatial explanation of the morphological ‘causes’ and ‘effects’ of movement and dynamic densification.

For the sake of clarity, let us elaborate and illustrate this empirically informed understanding of the precedence of spatial configuration with *figure 1*, which is taken from Hillier *et al.* (1993: 31):

Figure 2: space syntax – precedence of the configuration



Not least in the eyes of contemporary sociology, which consistently denies that space in itself can function as the *independent* variable in relation to societal dynamics (cf. e.g. Simonsen 1996: 505; Lefebvre 1991; Soja 2001; Gieryn 2000; Smith and Bugni 2006; Gottdiener 1985), the bottom axis of the figure is the less controversial: the existence of socially meaningful attractions in space can motivate the movement patterns just as the mere existence of such pedestrians movement produces a more livable and attractive urban space. This is, however, not what is morphologically crucial. We have to consider how the configuration is the confounding factor of the movement-attraction relation, that is, how the configurational properties of space simultaneously explains the movement economy and the spatial existence of social attractions. Consequently, the ‘reverse’ upward causality that sociology always-already gives precedence, must be understood as an inert dynamics, not least because the spatial configuration is crystallized temporally before (*time₁*) the social dynamics which take place in the lived and localized moment (*time₂*).

The Durkheimians lesson is: configurational space is a constituent property of the material substratum. As already mentioned, it is striking that Durkheim left this space morphological perspective untheorized. In all fairness, we have to take into account that Durkheim’s theoretical omission is not simply a result of lacking sociological fantasy, but rather has to be understood in the context of the undeveloped methodological tools, especially of the quantitative kind, that Durkheim had to his disposal. We have already seen how it was crucial for Durkheim to establish sociology as a positive, that is, a positivist science modeled on the natural sciences. Crucially, this positivist effort was depended on operational objectivist methodologies capable of observing the social facts from outside, as a ‘thing’ which exists independent *from* and operates ‘exterior’ and ‘restraining’ *on* the individual. Thus, Durkheim’s methodological dictum: “The first and most fundamental rule is: *Consider social facts as things.*” (Durkheim 1938: 14, original italics). The question is whether it was this methodological criterion that made it difficult for Durkheim to establish morphological space as a social fact, measured as an objective ‘thing’? This methodological problem is, as mentioned above, related to the empirical fact that space represents a troublesome object of study: contrary to the, methodologically more simple, ‘physical object’ of most architectural theory (the house, facades, etc.), the difficulty arises due space as “(...) the empty volumes of space resulting from that object into pattern” (Hillier and Hanson 1984: 1). Thus, the methodological problem arises: how do one measure emptiness. A void has no thingness; and consequently no ‘weight’ to be measured on. Following this reasoning, I agree with Hillier and Raftery’s (2010) methodological argument that “[t]he gap between space and society (...) is a measurement challenge first and foremost”; however, I am more cautious towards their suggestion that Durkheim is a methodological role model in the capacity as one of “(...) the founding fa-

thers of social theory [that acknowledged] space was a factor in human existence.” (Hillier and Raford 2010: 266, 279; cf. also Hillier 2008: 224). On the level of theory, Durkheim showed, despite his flaws, considerable attention towards space, but he succeeded in no way to translate these spatial aspirations into operational methods. This methodological deficit is, in all likelihood, part of the reason why the analytical ‘gap’ between space and society – which incriminated *The Division of Labor in Society* – was never overcome with a theoretical cause explanation of the origin of the dynamic density.

Let me stress that these reflections on Durkheim’s methodological shortcomings rather than being a rejection of his contribution must be understood in its historical context. Thus, we have to take it serious that Durkheim’s most important student, his nephew Marcel Mauss, in his reflections on the prospect of contemporary sociology considered the undeveloped quantitative methods as a major constraint. However, the future heralds progress: “(...) we already know how from the historians and sociologist of the coming generations will be better armed than we are.” (Mauss 2005: 70). Hillier and Hanson’s methodological contribution *is* this future: the space syntax approach has, for the first time, made it possible to measure the ‘non-discursive regularity’ of space (Hillier 1996: 111ff) as a Durkheimian ‘social fact’, that is, as an exterior and restraining ‘thing’ that mechanically affect the movement economy of the city. When Hillier and Hanson (1984: 18) found it ‘useful’ to build the space syntax paradigm on the foundation of the elementary cell, it is more accurate to designate this as a methodological *usefulness* of the spatial morphology which Durkheim should have, but did not succeed, to formulate. Instead of linger on whether Durkheim simply is ‘useless’ (Tilly 1981) or ‘usefull’ (Emierbayer 1996), it is by ‘useful-filling’ Durkheim that Hillier and Hanson are to be considered as a remarkable contribution to urban sociology and Durkheimian scholarship.

Mind the Gap: Between Design-Level Methods and Macro-Sociology

As it should be evident from the above, the space syntax paradigm has made a crucial methodological contribution to build the gap between space and society. Notwithstanding this fact, we have to take into account how Hillier and Hanson in their original and ‘gap bridging’ reception of Durkheim also produces another analytical gap. It is my thesis that several of the actual and potential problems that encumber the space syntax approach emanates from this analytical gap. In indentifying what constitutes this gap, we should start by specifying that the space syntax’s path breaking corrective to Durkheim consists in a *micro*-methodological corrective that works on a “finer level of resolution” compared with the existing research contributions (Hillier 1996: 140; 2008: 218). That is, by applying methods that measure space at the scale of the “design-level” it is possible to investigate “(...) the ways in which space ‘works’ at the level of patterns of movement.” (Hillier 1996: 140, vi; cf. also Hillier and Raford 2010: 269). Precisely such a micro-methodological insight into to spatially embedded movement patterns is what is sociologically crucial: following Hillier and Hanson, the social solidarity has, in concordance with Durkheim’s general argument, its origin in the morphological variations of ‘co-presence’, ‘awareness’ or ‘encounters’ – as Hillier and Hanson synonymously denote these morphological equivalents to Durkheim’s dynamic density (Hillier and Hanson 1984: 25, 223f).

Thus, the objective for Hillier and Hanson is to make a spatialization of Durkheim’s concept of social solidarity, that is, that different spatial configurations result in different types of social solidarity (Hillier and Hanson 1984: 20, 159ff; Hillier 1989: 18). First, Hillier and Hanson reassess the organic solidarity as ‘spatial solidarity’ in which the individuals meet randomly and interact across social categories and territories, particularly in interdependent market relations in similitude with Durkheim’s original argument. This is a spatial solidarity because it develops by virtue of space’s mechanical compression and ‘mixing’ of individual movement patterns. Thus, this implies a rather limited degree of collective attention, or as it is formulated elsewhere: this spatial sociality has the nature of a ‘virtuel community’ (Hillier 1996: 154; Hillier *et al.* 1987: 248f)

given that it is minimal and not yet realized but, nevertheless, is the collective germ of the organic solidarity. Second, Durkheim's mechanic solidarity is reassessed as a 'trans-spatial solidarity' in which a strong social bond is a result of the individuals identifying with the same social category (as 'tribe' member, 'WASP', etc.), that is, independent or trans-spatial of the spatial embeddedness. Crucially, the solidarity is not a product of the spatial encounters and co-presence with the urban strangers, whom is rather kept at bay by strategies of spatial segregation.

In relation to our identification of the analytical gap, it is crucial to notice how Hillier and Hanson attempt to interlink, on the one hand, a rigorous micro-methodological approach with, on the other hand, a spatially reformulated morphology that nonetheless hold on to Durkheim's distinctively macro-sociological understanding of social morphology, society and solidarity. Thus, when Durkheim in *The Division of Labor in Society* speaks morphologically about dynamic density, it is always-already done in a macro-sociological terminology of 'population', 'volume' or 'degrees of density' (Durkheim 2006; cf. also Halbwachs 1960: 31). Consequently, Durkheim does not apply the micro-sociological categories 'co-presence', 'encounters' or 'awareness', as it is the case of Hillier and Hanson – including the concept of 'virtual community', which, following Hillier's (2006: 4, 141) argument, seems to be a sort of micro-sociological synthesis of these micro-morphological concepts. Thus, the core of the gap consists in the mismatch between, on the one hand, Hillier and Hanson's spatial *micro*-methodological analytical ability to explain and probabilistically predict where the movement economy intensifies in, and as a function of, the spatial configuration, and, on the other hand, Hillier and Hanson's rather vague *micro*-sociological conceptual framework unable to understand why such bodily co-presence is generating social solidarity. The morphological question on 'being' is analytically disengaged from the physiological question on 'doing', to put in with Durkheim's precise distinction (cf. Durkheim 1960: 363).

Following, the analytical gap could be described as tension between a quantitative methodology of the space syntax, and a more qualitative question on how such quantitative variations of co-presence can have qualitative implications for society and solidarity. Principally, it is a tension that has to do with the disciplinary distinction between social morphology and social physiology and thus Durkheim's theoretical admonition that a morphological quantification of the material quantum of co-presence is not to be analytically detached from the social physiological question on the moral qualities of social life. Formulated in the words of Mauss, which recapitulates Durkheim's (cf. e.g. 1995: 230; 1899; 1890; 2005a) numerous warnings against material and spatio-morphological reductionisms, it is crucial to unite any consideration on the spatio-morphological movement economy with the physiological understanding of moral (e)motions: "One never knows where a social phenomena will lead: a society may pack up and depart as a whole, having heard rumors of a better world elsewhere. So, never forget the moral while studying the material, and vice versa." (Mauss 2007: 23).

This pinpoints the problem of space syntax's application of morphological notions such as 'co-presence', which, evaluated with a micro-sociological yardstick, is applied as a theoretical 'black box' explanation of the emergence of social solidarity. Crucially, it is a theoretical black box which cannot be 'opened up' by, but on the contrary is a product of, Hillier and Hanson's reception of Durkheim's theoretical framework from *The Division of Labor in Society*. Thus, while Hillier and Hanson micro-methodologically succeeded to open the 'black box' of Durkheim's non-explanation of the dynamic density, their macro-sociological reception of Durkheim results in a theoretical 'black box' explanation of why the morphological variations of co-presence have social and solidary implications. What furthermore underlines this analytical gap is how Hillier and Hanson's embedding of the co-presence in the context of modern metropolitan urbanism, characterized by the virtual community in "streets with the world of strangers" (Hillier 1989: 18), is distant from Durkheim's (macro)sociological line of thought. Durkheim does simply not address the solidary potentials of such everyday meetings and urban sociality, his theoretical argument does *solely* concern the organic solidarity which is the functional product of the division of

labor in the macro-social market situation. Indeed, one might pose the polemical question, whether Durkheim's neo-Darwinian perspective would not predict the opposite situation than Hillier and Hanson assert – with reference to Durkheim: could it not as well be argued that the result of the sheer morphological densification in the urban streets would result in a pathological everyone's struggle against all (cf. Choldin 1978), that is, a vicious rather than a virtual community? To recapitulate this argument, I argue that the analytical gap is a by-product of a distinctively macro-sociological reception of Durkheim which is not at 'design-level' with of the micro-methodological quantification of the co-present and virtual community. However, this is not the only problem that space syntax's macro-sociological reception of Durkheim results in: as we shall see in the next section, Hillier and Hanson's (1984) founding of the space syntax paradigm lies also, on a more general level, in problematic continuation of a distinctively macro-sociological reception of Durkheim. Thus, Hillier and Hanson's argument is associated with the Durkheimian 'macro-wing' which (Collins 1994: 181ff), in continuation of *The Division of Labor in Society*, implies a functionalistic concept of society (cf. e.g. Parsons 1951; Schnore 1965).

The Socio-Functional Logic of Space

For the sake of clarity, let us immediately make it clear the 'functionalism' does, in this context, no refers to the tradition within architecture. This latter tradition has only the name in common with former sociological tradition that focuses axiomatically on how the *partial* phenomena of society fit together and contribute to the maintenance of the societal system as a *whole*. That is: "functional analysis examines social phenomena in terms of their consequences for the broader society." (Turner and Maryanski 1979: xi). It is evident that Durkheim makes such a reading possible that emphasizes society as a social order or systemic totality with functional 'needs' or 'requisites', which the societal parts serve to reproduce (Turner and Maryanski 1979: 95ff). This was, as we have seen, precisely the argument about the physiological function of the division of labor that serves the societal 'need' of solidary mitigation of the acute struggle for existence that the morphological increase in dynamic density had prompted. Given this outline of the macro-sociological functionalism in the style of Durkheim, we can return to the exegetical reading of *The Social Logic of Space* in order to investigate, how this book seems to establish the space syntax paradigm on a macro-sociological functionalist foundation. As we shall argue, Robertson (2006: xvi) is right in suggesting that Hillier and Hanson's (1984) argument has 'functionalist undertones'; however, Robertson's suggestion remains a claim since it is not explained why this is the case and, furthermore, what this functionalism implicates. These questions I will clarify below. As a point of departure of such identification and critic, we should draw attention to how space is a function of anything but a coincidental 'social logic': as the following key quote can help us to identify, Hillier and Hanson argue, in continuation of the Durkheimian 'macro-wing', for the existence of a functionalist logic of space:

It would seem clear then, that there is always strong relation between the spatial form and the ways in which encounters are generated and controlled. But why should these patterns be so different in different societies? *Could it be that different types of society required different kinds of control on encounters in order to be that type of society*; because if this were so, we could reasonably expect it to be the deepest level at which society generated spatial form (Hillier and Hanson 1984: 18, my italics).

Let us proceed stepwise: initially Hillier and Hanson points out how the relation between space and society is to be understood in the context of how movement patterns of space is generated and controlled. Crucially, these spatial pattern variations in co-presence, thus, are to be explained with reference to the fact that different societies have different *functional requisites* which have to be met in order to be reproduced as that type of society: "Different types of social for-

mation, it would appear, require a characteristic spatial order, just as different types of spatial order require a particular social formation to sustain them” (Hillier and Hanson 1984: 27). Thus, it is argued that the social logic of space primarily serves different functional requisites which are predominant in respectively organic (‘spatial’) and mechanic (‘trans-spatial’) solidary societies. While the former requires a spatially well integrated space – the guarantor of societal coincidences in and dynamics of the movement economy – the latter requires a segmented and segregated societal space. The socio-functional logic of space is to meet these specific societal need for solidarity; a functionalist interpretation which, furthermore, is underlined by Hillier and Hanson’s determination of the most principal axiom of the theory of space syntax:

This leads us to the define a principal axiom for the whole system theory of space: spatial organisation is a function of the form of social solidarity; and different forms of social solidarity are themselves built on the foundations of a society as both spatial and a transspatial system (Hillier and Hanson 1984: 142).

This genuinely functionalist logic – that is, space or spatial organization serves the functional requisite for societal solidarity – is furthermore consolidated by Hillier and Hanson’s terminology when they describe the situation in which space does not spatially fulfill society’s functional need for solidarity. Following Durkheim’s (2000: 315ff; 2005b) characteristic (and controversially biological) terminology and his theory of the ‘anomic’ forms of the division of labor, such situations are described as a token of a ‘pathological’ urbanism, spatiality or community. That is: the *deficiente modus* of the ‘normal’ or ‘healthy’ condition of the socio-spatial system (cf. e.g. Hillier and Hanson 1984: 2ff; Hillier 1996: 159; Hillier and Vaughan 2007). We have already mentioned several times how Durkheim was fascinated and inspired by biology and how he accordingly applied several biology-functionalist analogies to explain societal dynamics. Thus, it is this functionalist terminology that Hillier and Hanson applies: with analogue to biological organisms, societal systems can be in a more or less healthy state of ‘equilibrium’ (cf. Durkheim 2000: 315; 2006; Meštrović 1987).

In justice, we have to stress that it is disputed in the literature to what extent Durkheim applied this analogy as a purely metaphorical parallel between ‘society’ and ‘organism’, or whether the analogue indicated some essential or substantial resemblance between these ontological domains. While the former indisputable is less controversial than the latter, both versions of the analogy imply a fallacious understanding of societal integration: contrary to biological systems, society’s component parts are not constituted by the very relation they have to other parts in the societal whole, that is, the heart or brain does only have living existence as seamlessly integrated in the whole of the body. However, society is not such an internally coordinated totality; the individual, to take the simplest example, does not solely exist because – and in order to serve the quasi-biological need – of a societal totality (cf. e.g. DeLanda 2006: 9). Here, we must add that we precisely find such a critical argument in Hillier and Hanson (1984: 33ff) as they, initially, dissociate themselves from a ‘quasi-biological’ interpretations on how society, understood as a ‘discrete system’ of elements, obtains societal properties of a higher or whole (*sui generis*) order. Thus, it must be understood within the framework of this general distancing from simple biological analogies, when Hillier and Hanson subsequently draw upon the biological concept of ‘genotypes’. This is done in order to develop an explanation of how society, despite its ‘non-organist’ organization, does have a sort of ‘genetical’ structure of information, which coordinates the socio-spatial system of discrete elements. In the case of the socio-spatial system this structure is, however, an ‘inverted genotype’ since the structure of coordination information does not derive from a biological genotype or integrative potential to be realized in the spatial reality: the socio-spatial genotype is understood as ‘inverted’ as the information structure, that is, the social logic of the information, *is* the spatial reality itself (Hillier and Hanson 1984: 44; Hillier and Netto

2001: 13.9). Thus, space has in itself a social logic containing enough information to reproduce and functionally maintain the societal system: the organic and mechanic solidarities require, if they are to function non-pathologically, different organizations of spatial integration and segregation. With this line of thought, Hillier and Hanson elegantly avoid inscribing their argument in a biological version of a Durkheimian functionalism and the invalid organism analogy which, unquestionable, burdens the functionalist tradition (cf. e.g. Giddens 1984: 1, 193ff). However, it is not without functionalist costs that Hillier and Hanson develop this, in many respects, radical spatio-morphological reformulation of Durkheim's functionalism: essentially, Hillier and Hanson sustain Durkheim's functionalism, but reassess its socio-biological analogies to what we might call a 'socio-spatial functionalism'. Let us take the following quote into account:

The pubs are analogous to the kivas of Hobi society, in the sense that they operate not only in a localized way, but as a means of generating a higher order of system (...). The same type of morphological principles, though with a very different social mechanism, is illustrated by the relation between division of labour and the wider system in the medieval town (Hillier and Hanson 1984: 254).

The crucial and problematic consists in the theoretical parallel between, on the one hand, the thesis that space in such diverse societies as our modern and the pre-modern Hobi culture serves the functional requisite of a higher societal order and, on the other hand, a more classic Durkheimian argument that the division of labor fulfills the functional need for solidarity, as it, allegedly, was the case in medieval town guilds. Thus, *the division of labor* and, following Hillier and Hanson's spatio-morphological reassessment of the social morphological reasoning, *configurational space* fulfills society's functional requisites for solidarity. However, we have to face the paradoxical fact that Durkheim would disagree methodologically in this socio-spatial functionalism given that it analytically confuses a *cause* explanation with a *functional* explanation. Although Durkheim was the modern founder of functionalism, Durkheim is in this methodological regard far less functionalistic than many of his successors (cf. e.g. Parsons 1951; Malinowski 1926), including Hillier and Hanson's socio-functional functionalism. Thus, Durkheim was exceptionally explicit with regard to this methodological distinction between cause and functional explanations: "(...) social phenomena do not generally exist for the useful results they produce." (Durkheim 1936: 95; cf. also Durkheim 1963: 339). The methodological insistence on how the relation between cause and function *non-corresponds*, Durkheim underlines empirically by arguing that the progress of division of labor did not exist or happen in order to fulfill a functional need for organic solidarity and is, consequently, not to be functionally explained. Certainly, the division of labor was part of the cause explanation of the organic solidarity, but the 'cause' and this solidary 'function' must, according to Durkheim, be understood in the context of a historically contingent progress – *without* any given end goal: "We cannot employ *aim* or *object* and speak of the end of division of labor because that would presuppose that the division of labor exists *in the light of the results* which we are going to determine." (Durkheim 1964: 49, original italics).

This Durkheimian distinction pinpoints Hillier and Hanson's problem: in applying their socio-spatial functionalism, they do not uphold a sharp methodological distinction between cause and functional explanations. The spatial configuration has, in Hillier and Hanson's argument, an inherent social logic which precisely is organized *in order to fulfill* a functional requisite: the need for social solidarity. Space serves functionally the objective of its inherent social logic; and, space is, thus, to be functionally explained "(...) *as a means of* generating a higher order of system." (Hillier and Hanson 1984: 254, my italics). When Hillier and Hanson argue that space has a social logic, they apply a functional explanation of how space is organized in order to reproduce a social and solidary system. Thus, *qua* the socio-functional logic, space has a functional *telos*: the social solidarity. As Durkheim already knew, and as Turner and Maryanski (1979: 118-124) have

thoroughly elaborated, such a *teleological* reasoning is probably the single most serious problem of functionalism. While the common critic of the biological analogy often is rather superficial, simply due to the fact that the analogy often is meant and applied superficially by the functionalists, the critic of teleology concerns the *logical* core of functionalist reasoning. Specifically, this concerns teleologies applied in an ‘illegitimate’ way (Turner and Maryanski (1979: 118f), that is, when it is assumed that social processes and structures come into existence and operate to meet certain social goals, without establishing the causal sequence which enables this goal to regulate these processes and structures. In a nutshell, this causal sequence is often logically impossible to establish (Merton 1936; Andersen 2000: 232) given that the teleology violates the chronological sequence of time itself. That is: how is it possible that a social phenomenon (e.g. ‘social solidarity’) which occur in *time*₂ functionally explains events that take place in *time*₁ (e.g. ‘division of labor’)? Thus, the question is whether the space syntax is capable of establishing such chronological and causal sequence and, thus, avert that their socio-spatial functionalism results in an illegitimate tautology. In relation to this question, it could, obviously, be asserted that the functionalist teleology is to be explained by the architect’s, urbanist’s, etc. goal-orientated interventions in the spatial configuration with an eye to build a more integrated and solidary society. Here, one should keep in mind that apart from the purely scientific aspirations of the space syntax approach, the space syntax was also, deliberately, developed with the teleological intention to be applied in practical reconstructions of the social logic of space (cf. e.g. Hillier and Hanson 1984: 268).

Although these are empirical questions, which are not to be investigated within the frames of this theoretically orientated paper, a clarification of the socio-spatial functionalism *as* a kind of intentional intervention in configurational space is hardly sufficient to avert an illegitimate tautology. Just as all other purposive social actions architectural and urban planning interventions will be subject to the law of ‘unanticipated consequences’, as it is famously stated by Merton in his (self-)criticism of functionalism, including its illegitimate teleologies (Merton 1936; cf. also Merton 1967: 19-84; Giddens 1984: 293ff). Exposed to the complexity of reality, the scarcity of teleologically realized intentions is rather the exception that proves the rule of the unintended consequences of social action. In this respect, *power* is often the critical issue, not least when it comes to architectural and urban planning decisions concerning the urban spatial configuration: embedded in a hidden power struggle between antagonistic interests, the social logic and teleological intentions to optimize integration and social solidarity often “(...) disintegrated into a large number of disjointed sub-projects, many of which had unintended, unanticipated and undemocratic consequences (Flyvbjerg 1998: 225; cf. also Bourdieu 2005; Dovey 1999). In other words, we have to consider how power struggles constitute a blind spot of functionalism given that it often disregards how a given socially integrative function does not, as the functionalist axiom presumes, serve society as a ‘whole’, but rather and often reflect, and thus serves, powerful partial interests (Collins 1975: 21, 421; Adorno 2000: 40ff). In this conflict theoretical light, Hillier and Hanson (1984: 28), and the functionalist tradition in general, owe us an answer to how it can be scientifically determined whether a given socio-spatial structure is morally ‘healthy’ or ‘pathological’ for society as a teleological system?

If this question is not answered adequately, we are left with no moral safeguard against that the space syntax’s explicit goal to be a “moral science of design” (Hillier and Hanson 1984: 28) in reality, functions as a sort of ‘socio-spatial engineering’ which simply reflects and legitimizes partial power interests in society. While the societal power structures can intervene in and, in this way, ‘splinter’ the functionalist order of the socio-spatial city, such unanticipated consequences also emanate from the city itself. Thus, and contrary to Hillier’s functionalist insistence that the spatial structures “(...) are ‘nearly ordered’, not ‘nearly chaotic’ (Hillier 1997: 35.02), one might consider whether the functional *telos* of space does not fade away when the practices of urban everyday life and architecture are embedded in the metropolitan dynamics whose spatial com-

plexity is on the ‘edge-of-chaos’ and, thus, always already ‘far-from-equilibrium’ (cf. Batty 2005; Griffiths 2011: 82; Urry 2003; Jacobs 1992: 432f), that is precisely: far-from-a-functional-equilibrium. Accordingly, the far-reaching implications of such a complexity theoretical argument is that we have to be very moderate when it comes to what extend urban space can be planned and organized in order to serve a functional-teleological purpose which reflects a given social logic. Thus, if complexity is the antithesis of teleology, the inherent logic of space might be a logic beyond functionalist orders. Or in other words: is the emphatic quality of the metropolis not precisely that the complexity of the spatial configuration also implies a *chaotically* unstructured, and not only a *functionalistically* “structured, non-correspondence” (Hillier and Hanson 1987) between socio-territorial and spatial practices – as well as between functions and causes?

The Why of Where: Towards a Micro-Morphology of Urban Rituals

Let us in the light of these critical remarks return to our point of departure, that is, the analytical gap between the micro-methodological approach of space syntax and the macro-sociological reception of Durkheim. Thus, it is my argument that it is specifically this analytical gap, which gives rise to the two related problems we have discussed above: first, the difficulty to demonstrate the sociological relevance of the morphological concepts of ‘co-presence’ (including its conceptual equivalents), and, second, the potentially illegitimate teleology of the functionalist reasoning of space syntax. In this sense, it is my argument that there is an analytical price to be paid for the space syntax paradigm following the Durkheimian ‘macro-wing’. In the rest of the paper I, consequently, will argue that the most fruitful way to overcome this analytical gap, and thus resolve the problems that emanate from here, is to give the (macro-)sociological perspective of space syntax an axial turn towards the Durkheimian ‘micro-wing’ (cf. Collins 1994: 193).

To put it in a nutshell, the distinction between the Durkheimian micro and macro wing can be defined in the two traditions that respectively follow Durkheim’s early and late *magnus opus*, that is, the macro-sociologically orientated *The Division of Labor in Society* from 1893, or the more micro-focused *The Elementary Forms for Religious Life* from 1912. Thus, it is this latter work we now have to take into consideration. As the title suggests, we are dealing with a sociological study of religion. Specifically, the focus is on the totemism of Australian aborigines, whose elementary religious practices Durkheim utilizes to develop a general theory of the societal genesis and functions of religion (Durkheim 1995). We do not need to go into Durkheim’s complex and empirically rich chain of argumentation, but instead head straight to Durkheim’s basic theoretical idea – and positivist provocation: when individuals participate in religious rituals, it is, in reality, society they worship. The ‘position’ of the transcendental power which the believer worships is sociologically dislocated in favor of society and thus, religious ideas are nothing but a symbolic expression of society. Essentially, religion is a system of ideas, or more specifically, the way in which individuals imagine themselves as a part of society (Durkheim 1995: 277). Thus, society understood social physiologically as a collective consciousness, *sui generis*, is both constituted by and constituent for religious life. “If religion has given birth to all that is essential in society, it is because the idea of society is the soul of religion.” (Durkheim 1995: 421). The reason for Durkheim’s interest in the religious question is his sociological understanding that it primarily is by religious functions that society on the whole is possible. As Durkheim states: “Everything is religious in principle.” (Durkheim 2005a: 16). For our present discussion, it is crucial that the religious constitution of society is primary to be understood as a micro-sociological product of ritualized interaction in small groups. Following Goffman (1967; 2010: 58ff) and his theory of the ‘interaction rituals’ of everyday life, which is considered the first dedicated attempt to read Durkheim as a genuine micro-sociology, Collins thus argues

(...) that the strength of the Durkheimian tradition has been its contribution to micro-sociology, rather than as a theory of the macro-level societal integration or social

evolution. Especially in *The Elementary Forms*, Durkheim provides a model of how solidarity and shared symbols are produced by interaction in small groups; thus it is an easy extension (...) to see these groups as local, ephemeral, or mutually conflicting, rather than integrated into one large society (Collins 2004: 14-15, original italics).

As it appears, a crucial motivation for pursuing a micro-sociological reception of Durkheim is the intention to reject functionalism, including the teleological problems that strained Hillier and Hanson. Instead of understanding society as an integrated 'totality', Durkheim should be applied micro-morphologically to demonstrate the actual and often conflictual interaction rituals in which the societal solidarity and macro-structures are locally produced and reproduced (Collins 2004: 6; 1981). Without underestimating the profoundly original and influential contribution of Goffman, I will in the following outline how Collins, in the light of this rejection of the Durkheimian macro-wing, develops a radical micro-sociological theory of *interaction rituals*, in short *IR theory*. As we shall see, this IR theory is probably the most advanced micro-analytical refinement of Durkheim to date and, thus, the obvious corrective to Hillier and Hanson's micro-sociological deficit.

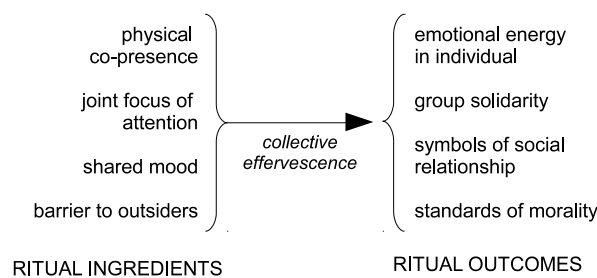
Let us, initially, face the question which at first sight seems to contradict that Collins' neo-Durkheimian IR theory is relevant at all for the present discussion of spatial and social morphology. Following Durkheim's principal division of sociology we might ask: is Collins' contribution – as a sort of sociology of religion – not to be included under the social physiological domain, and thus disengaged from our current engagement with the question of morphology? This is not just a rhetorical question given the fact that Durkheimian authorities as Lukes (1973) and Alexander (2005) argue that the social physiological and morphological elements were never successfully united in Durkheim's general sociology. Allegedly, the social morphology only represents a detached material 'flirt', an immature detour, in Durkheim's early authorship, which the mature and more 'idealistic' and physiological Durkheim rejected in his religious sociology (this interpretation especially based on Durkheim 1995: 229f; 425ff). However, Collins (1975: 2005: 132; 1994: 186ff) is one of the few in the sociological literature that contradicts this interpretation and thesis of Durkheim's idealistic and materialistic self-contradiction. In the present context, we shall not discuss these theory historical matters further; hopefully, it is sufficiently substantiated that the social morphology was not just a minor element of Durkheim's sociology. Furthermore, it is this morphological insistence that Collins lays as the foundations of his IR theory, which can be characterized as a systematic synthesis of micro-rituality and micro-morphology. Thus, his theory of interaction rituals is to be understood as a

(...) return to an older Durkheimian formulation in which social morphology shapes social symbols. Current IR theory differs from the classic version mainly in the giving a radically micro-situational slant, stressing that the social morphology that counts is the patterns of micro-sociological interaction in local situations (Collins 2004: 32).

Pace Lukes and Alexander: it is precisely this social morphological acknowledgement that makes Collins' IR theory the most fruitful micro-sociological corrective to the correspondingly radical micro-methodology of space syntax. What, furthermore, distinguishes Collins' contribution is the fact that the social morphological themes generally is unfamiliar to the micro-sociological tradition, which often gives the symbolic dimension of social interaction precedence (cf. e.g. Smith & Bugni 2006; Blumer 1969), that is, precisely at the expense of the non-representational and non-discursive regularities of space and materiality (cf. Hillier 1996: 111; Turner 2002: 221; Collins 1994: 242-288; Ball 1973: 20-21). In this micro-sociological respect, Goffman and Collins' further development hereof are the socio-morphological exceptions that prove this micro-sociological rule (cf. Goffman 1959: 109ff; 1963: 95; Collins 1988: 188-228; Rössel and Collins

2002). Thus, and even though, Collins also has to go through a partial ‘re-morphologization’ to render a theoretical integration with the space syntax possible, this can take place incommensurably. Despite the differences, Collins and the space syntax does co-exist within the same Durkheimian and social morphological paradigm. Consequently, the theoretical way is also paved for the ‘re-sociologization’ of Hillier and Hanson’s contribution, which is the first issue, we will bring up to discussion: thus, we shall return to the analytical gap, that is, the mismatch between, on the one hand, Hillier and Hanson’s successful micro-morphological explanation of *where* the movement economy intensifies in the configuration, and, on the other hand, their deficit micro-sociological understanding of *why* variations in the physical co-presence generate solidarity and social meaning. With this analytical gap in mind, we turn to Collins’ general or formal model of the interaction ritual which is sketched below in a slightly simplified version (cf. Collins 2004: 47-101; 1988: 192ff):

Figure 3: Collins’ neo-Durkheimian model of interaction rituals



The model is built on a distinction between ritual ingredients and outcomes. On the ingredients side, Collins point out the following: 1) one or two persons are physically co-present in the same place, so that they can affect each other bodily; 2) the participants have a joint focus of attention upon an object or activity; 3) the participant share a common mood and emotional experience; 4) the ritual is bound in time and space so the participants have a sense of who is (not) part of the ritual. Depending on the nature and quantity of the ingredients, the ritual builds up a varying degree of ‘collective effervescence’, which, as a ‘sort of electricity’ (Durkheim 1995: 217), intensifies emotionally the common collective experience of the ritual. The result, which is what the IR theory has the ambition to explain and predict, is a ritual outcome: a) emotional energy (EE) in the individual, that is, a feeling of confidence, elation, strength, enthusiasm and initiative in taking action; b) group solidarity understood as a feeling of membership; c) symbols that represent the group and which thus is charged with emotional energy; d) moral feelings, experiences as a sense of justice attached to the group.

Following the aspiration of Durkheim, Collins argues that the IR model, in principle, should be able to explain and predict *all* social situations: ”Thus [IR theory] has high theoretical ambitions: to explain what any individual will do, at any moment in time; what he or she will feel, think, and say.” (Collins 2004: 45). Crucially, this ambition implies that Collins do not only focus on ‘extra-everyday’, that is, often ‘formalized’, rituals (a football spectacle at the Olympic stadium, etc.) marked by high intensity and a high degree of joint focus of attention, Equally relevant are the more trivial or ‘natural’ rituals of everyday life with more unfocused patterns of interaction (cf. also Turner 2010: 3f; Goffman 1963). Such everyday situations does have a low intensity, but *is*, nevertheless, an operative interaction ritual. Thus, the IR theory also applies to situations with a low degree of densified co-presence and ritual intensity such as public waiting places, as well as situations with a higher (yet not extra-everyday) degree of co-presence and intensity such as the ritual “buzz of excitement” (Collins 2004: 82) that one feels when being in a busy street:

Unfocused crowds generate more tacit interaction than very sparse assemblies, and thus gives a sense of social atmosphere. Even though there is no explicit interaction or focus of attention in such places, there is a form of social attraction to being there. Being in a crowd gives some sense of being ‘where the action is’, even if you personally are not part of any well-defined action; the lure of the ‘bright lights of the city’ is not so much the visual illumination but the minimal excitement of being within a mass of human bodies (Collins 2004: 82).

Stressing the everyday life perspective of the IR theory is important in order to distinguish this argument from Turner’s (1969) neo-Durkheimian ritual theory which Hillier and Hanson applaud on a few occasions (cf. Hillier and Hanson 1984: 182; Hillier et al. 1987: 249; Hillier 1989). The state of ‘communitas’, that is, the experience of total equality and cohesion is precisely the extra-everyday (‘liminal’) situation *par excellence*, does not have much analytical relevance for the minimal and low intense rituality of the city, constituted by the civil inattention in the urban world of co-present strangers (cf. Lofland 1973; Goffman 1963: 83).

That fact that Collins’ theory is characterized by its analytical inclusion of these minimal forms of social interaction provides us, furthermore, with a counter-argument to Hillier and Hanson’s recurrent skepticism towards sociological theories of social integration, allegedly: “(...) social scientists have normally seen social interaction as the elementary social unit, and co-presence as merely prior to social interaction.” (Hillier 1996:142; cf. also Hillier and Hanson 1984: 25; Hillier in Westin 2011: 231). Following *figure 2* this critic does not apply to Collins since he does not conceptualize the micro-morphological concept of co-presence as something merely prior to the interaction ritual, but rather as a necessary ingredient *in* any interaction ritual. “Rituals is essentially a bodily process” (Collins 2004: 53), and Collins continuously stresses the ingredient of physical co-presence as the micro-morphological *sine qua non* of any interaction ritual. In this light, it is rather Hillier and Hanson that owe us an explanation of how the pure physical co-presence is understood as a sufficient condition for the emergence of sociality and solidarity in the city. Following Collins, the micro-morphological co-presence is certainly a necessary but not a sufficient condition for the ritual to produce such social phenomena or outcomes. In other words, it is simply because of Hillier and Hanson not taking the other conditional ingredients of the interaction ritual into account that they are unable to give a sufficient explanation of the question on why co-presence should generate sociality and solidarity.

However, following Collins further, we penetrate deeper into this pivotal question on how Hillier and Hanson did not clarify sufficiently the question of *why*. Even though the theory of interaction rituals primarily – and in continuation of Goffman’s (1967: 3) dictum on not to focus on ‘men and their moment, but ‘moments and their men’ – understands the ritual as a social *situation*, the IR theory also addresses the question of the individual motivation for engaging in IRs. That is: why is the individual attracted or repulsed of a given ritual situation (Collins 1993; 2004: xiv, 141ff)? As it appears from the outcomes side in *figure 2*, successful interaction rituals generate, together with solidarity, symbols and moral a positive emotional energy (EE) in the individual. To take part in successful rituals recharges your ‘emotional batteries’; EE increases the space for possible action: “[s]uccessful IRs give individuals both emotional energy and membership symbols, which are resources easily reinvested in producing further IRs” (Collins 2004: 149). Moreover, it is crucial that such ritual ‘reinvestments’ are exercised with a motivation for engaging in the interaction rituals which offer the best possibility to maximize the general flow of individual EE. Human beings are, due to their fundamental socio-situational nature, an ‘EE-seeker’ (Collins 2004: 171). Our primary motive as human beings is to share the situation, that is, to ritualize, with other beings. Thus, Gehl indeed it right when he – in concordance with Collins’ urbane example which we quoted above – points out *why* cities is liveably attractive: “People are spontaneously inspired and attracted by activity and the presence of other people.” (Gehl 2010a:

65; cf. also Maffesoli 1996; Jacobs 1992). Taking these considerations to its literal end, Collins (2004: 141ff) denotes the situational EE-seeking of the individuals as a *marked* for interaction rituals or ritual solidarity in which “(...) one seeks EE according to what is immediately attractive, and what is emblematic of past EE payoffs (Collins 2004: 174). While *space* – in which the individuals are situated as co-present – for a while has faded into the background of the above discussion, Collins’ concept of IR markets addresses the question of space in the IR theory, including how space has morphological implications for the IR ‘market formation’. Markets are spatial phenomena: they are embedded in socio-spatial situations and are, thus, to be described as series of local barter markets shaped by the spatial morphological conditions of society (Collins 1993: 213; 2004: 158f; cf. also Tsen 2011). Very akin Durkheim’s definition of the social morphology, Collins describes the relation between ritual and space as follows:

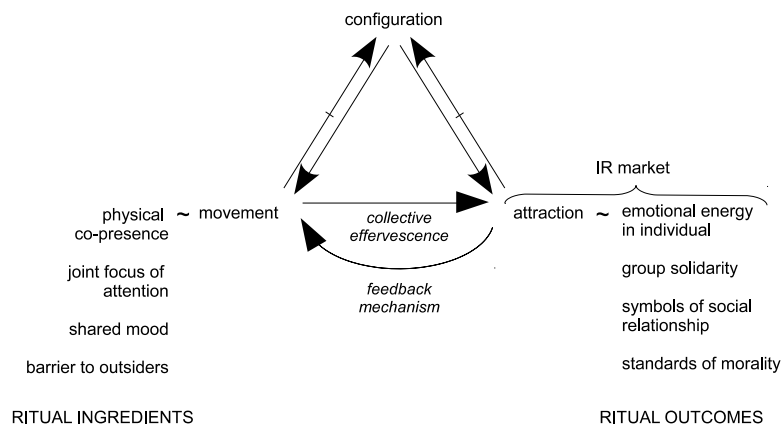
Interaction rituals vary in how open they are to those individuals willing to participate. The first determinants of accessibility of interaction situations is their spatiotemporal context. Availability of interaction partners usually depends on their ecological or spatiotemporal location in buildings or other places, technological processes, and orderings in workplaces, on the one hand, and on the availability of media of transport and communication on the other (Rössel and Collins 2002: 518).

Despite the fact that Collins must be considered as one of the most morphologically orientated of contemporary sociologists, it is never unambiguously clear how, or rather: where the spatial morphology shapes attractive IR markets. Thus, while Collins, on the one hand, gives a brilliant answer to the question of *why* – which the space syntax left unanswered – Collins, on the other hand, only managed to give us a rather superficial answer on the question which the space syntax approach has a brilliant analytical grip on, that is: *where* the spatial configuration shapes such market attractions. Presumably, Collins’ inability to answer the question of ‘where’ follows the fact that he does not apply a design-level methods, such as the space syntax approach, that would enable him to scrutinize the micro-morphological relationship between space and rituality. Thus, it is indicative that Collins’ (1983) discussion on how the IR theory should be micro-morphologically operationalized results in a rather diluted concept of space. In similarity with sociology in general which never, as we discussed in relation to *figure 1*, perceives space as the *independent variable*, Collins argues that space “(...) do not *do* anything; all the real causal forces must come from human beings acting in some situation (Collins 1983: 187, original italics). Precisely at this point, Collins spatial morphological potential comes to a methodological dead end. Sociological space is deprived its forces, that is, its potential to causally affect life and society (cf. Fine 1991: 166). Furthermore, this is specifically problematic given our focus on unfocused urban interaction rituals which, according to Turner (2010), in particular is subject to the spatial morphological forces: “(...) ecology and demography as social forces are generally more significant in unfocused than focused encounters, because in the latter the forces of status, roles, motivational need-states, and emotions generally dominate the flow of interaction.” (Turner 2010: 76). In relation to the question on the ‘where’ of the IR markets, Collins’s problem is that he misses the spatio-morphological ‘mode of production’ which the ritual forces and relations of interaction are subsumed. As it is summarized in *figure 1* the EE-seeker does not merely move from the one attractive IR market to the next by own motivation and forces; movement and attraction are, as we argued, to a wide extend subject to the lawful spatial forces of the configurational movement economy (Hillier 1996: 111ff; Hillier *et al.* 1987; Hillier and Hanson 1984: 23f; Hillier 2002). Movement in metropolis is primarily a function of the configuration; not, as sociology and Collins would presume, a function of social attractions. And, as *figure 1*, furthermore, points it out, social attractions are crucially determined by the logic of the movement economy: the social attractions of the city – its liable streets, financially profitable addresses, dynamic IR

markets, etc. – is conditioned on and emanates from the existence of a dynamical movement economy. The morphogenesis and localization of the social attractions of the city is, thus – by means of movement – crucially conditioned on the properties of the spatial configuration, as it is summarized in the axiom of the space syntax: ‘configuration generates attraction’ (Hillier 2002: 154; 1996: 125; 2000).

Thus, it is precisely this, methodologically validated, movement economical axiom that Collins lacks in order to clarify ‘where’ the IR markets are especially attractive. While Collins, on the one hand, explains why the dense and intense interaction rituals are attractive, and thus why the EE-seeking individual is motivated to take part in the ‘exciting buzz’ of the urban ritual, on the other hand, the movement economical axiom – ‘configuration generates attraction’ – enables us to understand where such attractive IR markets are localized *in* space and *qua* space. The fundamental spatio-morphological condition for an attractive IR market is the dense co-presence of physical bodies in space which, primarily, is generated configurationally by the movement economy of the city. Thus, I suggest the following IR theoretical version of the movement economical axiom: *configuration generates IR market attraction*. With these considerations on how the ‘why’ of the interaction ritual and the ‘where’ of the configuration are complementary aspects of the urban IR market, we are approaching a synthesis of Collins and the space syntax. Thus, combining the theoretical insights from *figure 1* and *2*, I suggest a micro-morphological synthesis which is outlined in *figure 3*:

Figure 4: Outline for a Micro-Morphological Synthesis



As it appears, the theoretical key to this theoretical synthesis is a double comparison between two sets of concepts: first, we juxtapose ‘physical co-presence’ with ‘movement’ which were already implied in Durkheim’s original definition of the social morphology: the dynamic densification of co-presence occur *qua* movement (cf. Durkheim 1960: 361). In similarity with Durkheim, Collins has, however, difficulties explaining why (or rather: where) this dynamic density or co-presence takes place in space: this analytical deficit is solved by *figure 3* given that the co-presence is explained by the spatial morphological configuration, that is, the movement economy of the city. Furthermore, *figure 3* reflects the fact that the spatio-morphologically densified co-presence is a necessary, but not a sufficient, condition for a functional interaction ritual to emerge: a full-fledged interaction ritual requires the existence of the remaining three ritual ingredients. This leads us to the ‘outcomes’ side of the IR model and thus the *second* juxtaposition between attraction and ‘EE in the individual’, that is, the foundation of the market for interaction rituals. Crucially, this explains why the individuals are motivated to take part in the urban interaction ritual, a fact that cannot be explained by applying merely the morphological concepts of co-presence or dynamic density. The spatio-morphological way of ‘being’ co-present in and due to space has to be synthesized with the physiological ways of ‘doing’, that is, the individual acts EE-maximizing on a market of more and less attractive IRs. This complementarity between ‘where’ and ‘why’ is

crucial to maintain in order to understand how the valuation of the IR market attractions is conditioned on and localized due to the underlying dynamics of the movement economy. In this sense space is not, as Collins (1993: 213) puts it, merely to be understood as a market ‘imperfection’ that morphologically confines the ritual activity of the EE-maximizing individuals. Rather, space is to be understood as interior dynamic of the IR market as the movement economy determines where attraction value occurs. Formulated with Adam Smith’s (2009: 264) famous metaphor, the spatial configuration is the ‘invisible hand’ of the IR market.

Empirical Excursus: Spatial Morphogenesis of an Urban IR Market

The fact that spatial morphology in this sense is given precedence in the analytical determination of the ‘where’ of the IR market is not to be mistaken for a spatio-material reductionism. As we have already argued, this would run counter to the Durkheim’s insistence that the social physiology is relatively autonomous from its material substratum and, furthermore, space syntax’s explicit distancing from a simple ‘architectural determinism’ (Hillier 1996; 138ff; Hanson 1998: I). The fact that the spatial morphology is a vital condition for where and how the IR market functions is not tantamount to a vulgar spatio-materialism: the ‘why’ cannot be reduced to the ‘where’. However, keeping this distinction in mind, it is crucial that the spatial morphology also is understood as the *independent* variable in relation to the socio-physiological dynamics and complexities of the city. Conditions of and changes in the physical properties of morphological space *can* restructure and orchestrate a new stage for rituality: the question of ‘why’ can be rephrased as conditioned on the question of ‘where’.

This ontological and methodological insistence that the spatial morphology also is an *independent* variable is a matter of principle: it calls attention to the physiological one-sidedness of the majority of sociological concepts of space. However, the prospect of Durkheim’s sociology is to overcome any such analytical one-sidedness. Thus, leaving the principles behind, the important question is how the physiological and morphological moments are dialectically unified. In *figure 3*, this process of synthesization is importantly emphasized by the *feedback mechanism* which analytically predicts that the independent affect has to be understood as a component in a positive or negative ‘multiplier effect’ (cf. Hillier 1996: 125; 1999) which dialectically unifies and in this sense solidifies the *interdependence* of space and sociality – morphology and physiology. Given analytical rather than principal character of this crucial point, it is appropriate that we elaborate the relation between space and society by drawing on an empirical example. Specifically, it is an example from my ongoing ‘urban ethnographical’ fieldwork in Copenhagen (cf. Goffman 1989; Goffman in Verhoeven 1993: 318). Actually, it was in another urban ethnographical errand that I participantly observed the streets of Copenhagen. Thus, it was after some months of unheededness that the daily walk past or along Dronning Louises bro attracted my spatio-sociological interest. Dronning Louises bro which literally means ‘Queen Louise’s bridge’ is a bridge that crosses one of the in total three lakes in the heart of Copenhagen. During the spring and summer of 2011 a social phenomena emerged which, at least in recent times, has not taken place at Dronning Louises bro before: during the weekdays, but especially intense in the weekend, a diverse crowd of hundreds of Copenhagener gathered at the sunny northern side of the bridge where they casually consumed coffee, beers and food from the nearby shops – and enjoyed the unfocused being together in the warmth of the sun. In the afternoon, the gathering grows in quantity and one or more mobile stereos creatively installed on freight bicycles play *chilled* electronic music; often as a presage of how the sound volume of the night will become substantially higher, more *up beat*, and consequently, result in a rising ritual intensity. Thus, I precisely participated in and felt the attractive ‘buzz’ of a functional IR market, in which the participants enjoy being in the pounding heart of the ritual, that is, ‘where the action is’, as Collins formulated the energizing attraction of the urban ritual in a dynamic street.

As such there is nothing unique in how the metropolitan city is rich in such attractive IR markets in which one (within the boundaries of the moral law of the city to exhibit an appropriate level of civil inattention) ritually enjoys and celebrates each other's interactional co-presence (cf. e.g. Greve 2011; Degen 2008; Massay 1995; Hajer and Reijndorp 2002). However, the surprise consists specifically in the fact that this recurrent ritual scenery had not happened before at Dronning Louises bro. The spring and summer 2011 were the time when this particular space in Copenhagen became an attractive IR market. To understand this emergence, we must take the spatial morphology into consideration and specifically the fact that Dronning Louises bro and its surroundings have undergone a significant spatio-morphological transformation during the last three years. The transformation is a part of Copenhagen Municipality's ambitious urban plan to reduce the through driving car traffic in the neighborhood Nørrebro that Dronning Louises bro flows into. The first changes were launched ultimo 2008, and after three years of experimenting and expansion the changes were made permanent in 2011. The spatial intervention was notable and included that the artery street, Nørrebrogade, that Dronning Louises bro flows into and which before the changes had been one of Copenhagen's major car thoroughfares was partially blocked for through car traffic. Furthermore, an expansion of the width of both sidewalks and bikeways was made, which, together with the installation of more benches at the center part of the bridge, almost gives the bridge a boulevard air. Similar to what Gehl (2011) has documented in connection with other comparable spatio-morphological changes of and in Copenhagen, the result is a sixty percent reduction in car traffic on Dronning Louises bro. Furthermore, the number of vulnerable road users has increased significantly, including an increase of bicycles by a third and thus making Dronning Louises bro the most bicycle crowded street in Denmark, and possibly in the world: 36.000 bicycles cross the bridge every day (cf. Beatty *et al.* 2009; Rådhussekretariatet 2009).

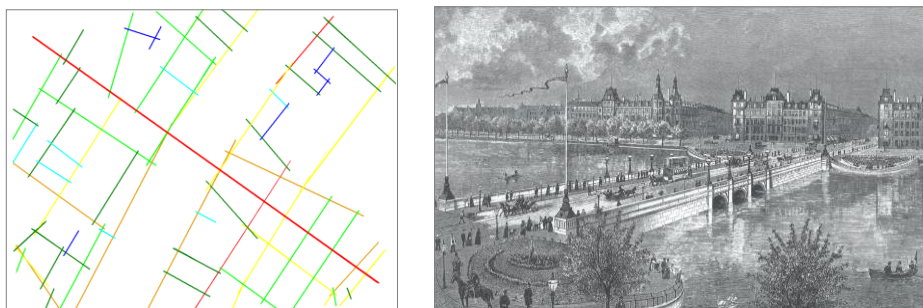


Laid-Back and Hectic Interaction Rituals at Dronning Louises bro

However, the question is whether these significant interventions in the component *parts* of the spatial morphology are sufficient to explain the morphogenesis of the IR market at Dronning Louises bro, that is, without taking into account the urban configuration and thus the analytical importance of the “(...) to *whole* of a complex rather than its parts (Hillier 1996: 23, my italics). Thus, following Stoner *et al.* (2003) we put forward the (counterfactual) argument that the increased width of the sidewalks and bikeways, as well as the dramatic reduction of throughfare traffic, presumably, only represents a *secondary* factor in explaining the movement economy of a city. Furthermore, this is also the case with respect to the importance of climatic and seasonal variations: the existence of a “double morphology” of seasonal rhythm (Mauss 1979; 2007: 21; cf. also Gehl 2011), in which the summer half renders possible more and lengthier outdoor co-presence while such ritual activity and intensity have difficult and frigid conditions during winter, cannot explain why the IR market emerged at precisely *this* spatial spot in Copenhagen. Finally, we must also consider the installation of the benches at the center part of the bridge an important but still a secondary factor: Whytes (2009: 110) classical augment that “[p]eople tend to sit most where there are places to sit” seem to overlook how this situation is conditioned of some-

thing more fundamental, that is, the actual existence of co-present people in spatial proximity to these benches.

Let us subsequently, in the light of these secondary explanations of the morphogenesis of the IR market at Dronning Louises bro, take the spatial configuration into consideration. Following, our analytical perspective is displaced from the component ‘parts’ to the ‘whole’ of the spatial complex and, thus, the ‘movement economy’ which the space syntax paradigm and *figure 3* would predict as the primary factor. In examining whether this is the case, I have conducted an integration analysis of Copenhagen by which it turns out that Dronning Louises bro is among the 2 percent best locally integrated (radius 3) streets in the spatial configuration of Copenhagen. Following the empirically robust results of the space syntax and its central proposition that the fundamental correlate of the spatial configuration is movement (cf. e.g. Hillier 1996: 113; Hillier *et al.* 1993), this strongly predicts that Dronning Louises bro is among the busiest streets in Copenhagen. As it is evident from the section of the axial map of Copenhagen in which Dronning Louises bro appears as the well-integrated axis that connects the neighborhood Nørrebro at the left and the center of Copenhagen directly to the right:



Left: radius 3 integration analysis. Right: a wood engraving celebrating the opening of Dronning Louises bro in 1887 (cf. Wassard 1990: 177); the view is towards Frederiksborggade and the ‘live center’ of Copenhagen.

In this respect, the precise configurational characteristic of Dronning Louises bro is its capacity as a vital ‘spike of the potato’ (cf. Hillier 1999: 06.14), that is, one of the well-integrated streets that looks as the ‘spiky’ extension of the ‘potato’ shaped ‘live center’ of many cities. Here, it must be added that this well-integrated property of, and position in, the configuration is no coincidence: in 1887 when the old Peblinge Bridge, in the attempt to handle the growth in traffic, had to be replaced a small but crucial spatial adjustment were made (Wassard 1990: 175). The new, wider and more aesthetic Dronning Louises bro were located a bit more southerly compared with the old bridge and thus as the well-integrated axis connecting Nørrebrogade, that flows into the neighborhood Nørrebro, and Frederiksborggade the flows into the mentioned live center – the ‘potato’ heart – of Copenhagen. This diachronic perspective on the configuration of Copenhagen draw our attention to the fact that the dynamic function of Dronning Louises bro in the movement economy of Copenhagen is far from recent. Here, we have to remind ourselves that this diachronic point was one of the crucial arguments for the precedence of the configuration. As it was argued in relation to *figure 1*, this precedence was also given by the fact that the configuration is materialized before (*time*_c) the movements and IR attractions which are lived out on the bridge today (*time*_e). Self-evidently we cannot validate this diachronic argument with ethnographical observations today. Substantiating this argument, we have to draw upon a historical source. With the poem ‘Hymn to my childhood street’ from 1927 the Danish poet Emil Bønnelycke offers a poetic-ethnographical and retrospective confirmation of the ‘constant’ configuration of Dronning Louises bro, that is, that this axis also at this point in time were an integrated and dynamic part of the movement economy of Copenhagen:

I am born of busy streets around Queen Louise's bridge / I am son of the electric panels of golden sky sign / I love the bustle and high hooting gaples of the street / born of the rushing traffic the great calm of the turmoil / I do not love gulls / and neither past hazes / But horse trot and street fight / And the blue exhaust fumes of cars / That I praise that I praise, that is time in its fight (Bønnelycke 1927: 29, my translation).

Much has remained unchanged: the sky signs do still reflect its golden light in the Peblinge Lake; the hoot, turmoil and bustle of the street rush still characterize today's picturesque of Dronning Louises bro. Time has changed, but the configurational movement economy remains the same. Despite the fact that Bønnelycke's poem, thus, makes us aware of what is unchanged the poem also, indirectly, suggests what specific change of the spatial morphology that has caused the emergence of today's IR market at the bridge. Thus, while it is understandable that Bønnelycke in 1927 expressed a futurist praise for 'the blue exhaust fumes of cars' given that he could not foresee how the cars – their number, exhaust fumes, health and safety risks and not least their noise level – on century later would dominate and destroy the picturesque of Dronning Louises bro.

In the light of my ethnographical reflections, and as resident throughout my adult life, it is precisely here that we find a key explanation of the morphogenesis of the IR market at Dronning Louises bro. Before the spatial changes, the car traffic was simply so dominating that nobody stopped and stayed at the bridge voluntarily. The reason for this was not only the quantity of aesthetically unattractive cars, but simply because it was impossible to have a conversation, or just think an uninterrupted thought, without being drowned out by the monotonous noise of the car traffic. This follows the fact that the cars are subject to the same movement economical law as the vulnerable road users. Consequently, the car traffic was also extraordinarily dense at Dronning Louises bro: a density with very high costs for the livability of this urban space. Before the morphological changes, Dronning Louises bro was anything but an attractive IR market. In this respect, the case of Dronning Louises bro is parallel to what Gehl describes has happened after the blockage for vehicular traffic on Broadway in New York: "(...) as soon as spaces are converted from traffic spaces to people spaces, people came along in thousand sans settle down to enjoy the scenery, the city, and city attraction number one – the other people." (Gehl 2010b: 237).

With this interpretation it is, however, crucial to maintain the analytical precedence of the configuration. Perceived spatio-morphologically, the primary explanation of the morphogenesis of the IR market is the high quantity of co-presence which the (temporally unmodified) movement economy *already* distributed through the well-integrated Dronning Louises bro. Due to the secondary spatial changes and reduction of car traffic, the co-present pedestrians and cyclists are suddenly given the incentive to stop and stay in this urban space, that is, to sit down on one of the benches and thereby take part in the ritual activity which now has become unusually viable in this urban spot. With reference to the above critic of the teleological reasoning, it must be emphasized that this progress has happened without a simple *telos*: the morphogeneses of the IR market did not unfold through a linear development or evolution in which small and planned morphological changes step-by-step culminated in a functional IR market. Rather, the morphogenesis of the IR market is an example of an 'organized complexity' that develops chaotically and unpredictably in non-linear leaps or phase transitions when the quantitative increment and intensification of urban elements passes a critical threshold (cf. Batty 2005; DeLanda 1997: 14ff; 2011). In this complexity theoretical sense, it is, thus, the movement economy that has contributed to the *primary intensification* of the system, that is, as a consequence of the spatio-morphological compression of co-presence which has taken place at Dronning Louises bro since

1887. Constrained by the noisy – anti-interaction-ritual – car traffic the system could, however, not accumulate the sufficient critical mass to reach the threshold and thus leap qualitatively into a new ritual order. The condition for such phase transition is precisely the *secondary intensification* of the system, first and foremost made possible by the reduction of the noisy car traffic. Thus, what at first sight seemed as the all-important change in the morphology is rather to be interpreted as the secondary change the movement economy of Dronning Louises bro lacked in order to redeem its inherent IR market potential. With these considerations on Dronning Louises bro across time and space we have, hopefully, proven what sociology usually fails to notice: that the spatial morphology also has effects as an independent variable. Space is not merely produced socially, but produces, in capacity as a configurational movement economy, also the vital conditions for social dynamics, including the emergence and localization of attractive IR markets. Taking this point further, we now have to take into account the feedback mechanism (cf. figure 3), that is, essentially the mechanism that dialectically unites the spatial and societal dimensions. Applying this mechanism, which both Collins (2004: 146ff) and Hillier (1996: 125-127) considers as pivotal, is crucial in order to complete our urban morphological understanding of the IR dynamics of Dronning Louises bro.

Taking our micro-morphological synthetization into account, it should be emphasized how Hillier and Collins' understanding of the feedback mechanism as coinciding in the concept of IR market. The existence of IR markets "(...) in locations that are already movement rich attract more movement, so there is a multiplier effect on the movement there." (Hillier 2008). The configurationally generated movement shapes the IR attractions which, as a positive spiral, attract further movement and thus generate more IR attraction. That is: the IR market attraction feeds positively back on movement and this both reproduces and reinforces intensity and attractiveness of the market. Thus, this positive (or if the process is reversed: negative) spiral, on the one hand, motivates participants to return to the attractive ritual and, on the other hand, motivates random pedestrians and cyclists to stop for a moment and take part in the ritual. Regarding the first group of IR participants, the feedback mechanism functions as follows. Once the socially attractive IR market is established it is likely that these EE-seeking participants are motivated to return to the attractive IR market – and motivate others by telling their friends about what an attractive place Dronning Louises bro has become. In my ethnographical observations at the bridge, this is a clear pattern: as for my own part, it was not the first time that the participants stopped by and took part in the IR. Many had prepared their ritual activities, bought some beer on the way, brought a music stereo, etc.

However, the majority of the participants in the IR do not appear to be part of this spatial (rather than trans-spatial) group, which joins the ritual *qua* intentions: the heart of the ritual is composed by the random pedestrians who are attracted to IR market *in situ*. This is the other aspect of the positive feedback mechanism. Once some of the co-present individuals are attracted to join the ritual, this further increases the intensity and the attraction value of the IR market and thus the possibility that even more will take part, etc. This is especially apparent if the pedestrians know some of the IR participants, as that almost obliges one to take a hold and take part – at least for a few moments. Normally, sociologists would interpret this as a proof of the fundamentally social dynamic of any ritual, that is, that an urban gathering is primarily to be understood as a process of social closure in which people who know each other and/or identify with each other's social position dominates and appropriates space (cf. e.g. Bourdieu 1984). The urban sociological analysis would undoubtedly consider the small majority of people in their mid-twenties as the single most important fact of Dronning Louises bro and, thus, leaving out the fundamental spatial morphological logic of the ritual. However, precisely because the movement economy has a spatial mechanism that cannot be fully territorialized, the IR markets of metropolis also offer themselves as an unpredictable and non-appropriable attraction in the urban order – at the edge

of chaos. Essentially, Dronning Louises bro is a celebration of such complexity of urban ritualism.

Closing Remark

Let me return to the point of departure, that is, the pointing out that Durkheim's social morphology is almost forgotten by contemporary sociology and how it, thus, is the merit of Hillier and Hanson to have found and revitalized the social morphology. Taking the silence of urban sociology into account, the best way to acknowledge this neo-Durkheimian contribution is by applying the '(micro-)sociological hammer': in the attempt to forge the Durkheimian bond between sociology and space syntax even stronger, we should not refrain from breaking the silence of sociology with a slap on the wrist of sociology. Thus, the current paper is essentially a request to more interdisciplinary interchange between these two Durkheimian branches. I hope that sociology will accept the challenge, not least as the stake is the possibility to regain a spatial sensitivity for the material substratum which the founding father of sociology regarded as a vital foundation of sociology and society.

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