



02. Contextualizing circularity in the architectural discourse

Parts to Wholes

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A rather crude yet accurate definition of a system is as a whole composed of related parts. An equally simple yet accurate definition of systems theory then is as a theory that examines the relations between parts, as well as the relation between the parts and the whole. However, various contemporary thinkers suggest that perhaps we would benefit by substituting the somewhat vague term 'system' for a more specific one.

Such theory would not privilege neither the whole over the parts nor the other way around. We can briefly call this term an '*assemblage*.' The concept of the assemblage was first introduced by philosophers Gilles Deleuze and Felix Guattari in the neologism *agencement*, a term that refers simultaneously to the action of parts coming together and to the resulting ensemble.

Therefore, an assemblage refers at once to both structure and operation; or in terms more familiar for architects, to both form and function. Assemblage theory, as opposed to traditional system theories, has four main differentiating characteristics. Let us examine each one of those based on Manuel DeLanda's extensive work on the topic.

The first crucial point is that *assemblages are fully contingent and therefore historically produced*. In other words, there is nothing fixed about them nor is there any assemblage that is given in advance.

Each assemblage; each system, in other words, is produced and it is the logics of its production as well as the logics of the processes that maintain the parts in sustaining their coming-together that need to be examined. Therefore, each assemblage should be treated as an individual entity, regardless of a conventional understanding of scale: from a city to a person and from a building to a bird's nest, each is treated as an individual that can — and in a certain degree do — interact and relate with one another. As such, there is no pre-established hierarchy of assemblages, but focus is placed on the actual and potential relations between systems.

The second point is that *assemblages are formed and composed by heterogeneous parts*. In other words, what matters when examining a system is not to approach it monothematically but rather unearth the heterogeneity and diversity of the elements that form it. For example, and for this we can turn to issues close to our discourse, when examining a given urban condition, one should include, besides actual persons and their social or other kinds of relations, one should include also the very material and symbolic elements that compose them as a community, the architecture of the built environment that their interactions take place, the infrastructure that supports them, the flows of energy sources that run through them and so on. Consequently, examining a system becomes the locus of a truly transdisciplinary effort.



Circularity for Educators

The third characteristic of *assemblages* is that *they can become part of other assemblages*. Keeping in mind that a conventional understanding of scale is not useful here, assemblages can be conceptualised as ‘micro’ and ‘macro’ depending on the relations with other assemblages that they partake or that take place in them. Individual people, for example, are micro while their social forms of organisations are macro, while these very forms are micro compared to the greater political organisations that they are part of. As such, assemblage theory proposes a truly relational understanding of the complex and dynamic interactions between different systems that do not wish to generalise but rather to examine what is singular in each given case study.

Finally, and most crucially, assemblages do indeed emerge from the interactions between their parts, but *once an assemblage is formed then it immediately starts acting as a source of constraints and chances for those constitutive parts*: wholes emerge in a bottom-up way, but they have a top-down influence on the parts. This has very important consequences on how a system is examined since its properties might be irreducible to its parts but that does not make them independent of them. For example, a city has properties that cannot be reduced directly and solely to its buildings, the infrastructure and the communities that compose it; however, once any or all these parts cease to exist, those up to now irreducible properties of a city also cease to exist.

The importance of assemblage theory therefore is that no system can ever be assumed to have fixed, eternal and static properties that would eventually lead to a reductionist and universalising account of it. In other words, with assemblage theory, systems

become embedded in time, they become dynamic and in a continuous intensive relation with their parts.