8th concept: Empirical and theoretical concepts and ascending from the abstract to concrete

Shaupp, M. & Virkkunen, J. (2016). Why management concept fails support manager's work: the case of the 'core competence of a corporation'. *Management Learning* 48(1), 98-100.

Ilyenkov, E.V. (1982). Dialectics of abstract and concrete in Marx's Capital. Moscow: the Progress Publishers. Available in Internet, Marxist archive.

Questions: What are the main differences between empirical and theoretical concepts?

The final concepts are about knowing and concepts we use in making sense of reality and in changing it. The first concept is the distinction between empirical and theoretical concepts. Empirical concepts are formed by *classifying* objects that have similar features and giving a name or label to the class (for example " vegetable" or " fruit"). This way of abstracting based on a shared feature, does not tell anything about the real interactions between the objects under the label. A theoretical concept explains an original and developing relationship between the objects, for example the relationship between variation and natural selection in the biological theory of evolution.

Also theoretical concepts are abstractions: they select and delimit certain elements and relationships of the phenomenon it regard essential into a model. When making sense of the development of a specific phenomenon rich in different features, also the historically specific elements and features needs to taken into account. A theoretical concept is a means that help in structuring the analysis of rich and chaotic reality. The result of the study is a well-articulated concrete historical account of the phenomenon in which the theoretical abstractions "disappears": the relationships it depicts are presented in concrete terms and vocabulary drawn from the data and specificities of the phenomenon.

Two forms of abstraction and generalization: empirical and theoretical

A concept can be understood as a generalized representation (be it internal and mental or external and material) of some aspect or part of reality produced through a sequence of the epistemic actions of abstracting and generalizing. When created, the concept functions as a resource and instrument for carrying out similar operations of abstracting and generalizing in new contexts (Leontyev, 1990: IV). There are, however, qualitatively different methods of abstracting and generalizing that produce qualitatively different kinds of generalized representations, that is, different kinds of concepts with varying functionalities as intellectual instruments. Davydov (1990: 86–109) highlights the difference between empirical abstraction that produces formal and classificatory concepts, and theoretical abstraction that produces models or principles that allow one to mentally

reproduce the interacting phenomena that make up a holistic system. We explain this difference in the following.

In a study of the ways in which people think, the psychologist A. Luria (1976: 55) presented a picture of an axe, a tree and a saw to the experimental participants in a remote, unindustrialized area in Uzbekistan and asked them which two of the objects belong together. Most of the participants who had attended school answered that the axe and the saw go together because they are both tools. They compared the objects and found a feature that was common to the two but which the third lacked. An uneducated peasant, Rakmat, however, answered: You need all of them, you need a saw and an axe to cut a tree. Instead of categorizing objects on the basis of similar features, he focused on the functional connections between the objects in a peasant's typical work action. Such functional connections between the qualities of objects can, however, only be found in their mutual interactions in practical activity or in experiments. According to Davydov (1990: 88–89), identifying such functional connections is the first, rudimentary form of theoretical abstraction that establishes relationships between qualities of objects, which cannot immediately be perceived, but appear in their interaction within a system.

The philosopher Spinoza was the first to point out this difference between forms of abstraction when he discussed the proper way of defining a concept. According to Spinoza, the fundamental properties of things are not understood as long as their essence, that is, the principle of their evolution or production is not known. If this is the case ... 'there is necessarily a perversion of the succession of ideas, which should reflect the succession of nature, and we go far astray from our object' (Spinoza, 2004 [1677]: 95-96). He continues, 'For instance, a circle should, according to this rule, be defined as follows: the figure described by any line whereof one end is fixed and the other free'. That is to say, a pair of compasses denotes the proper definition of a circle because it provides *the principle of producing* circles of any sizes and quality; also circles never created before.

Empirical abstractions are names of sets of objects or phenomena. They provide the criteria for subsuming objects into specific sets on the basis of their externally observable similarities and differences. The concepts based on such abstraction typically form a hierarchy of sets with an increasing scope and a decreasing amount of specifications. In this form of abstraction, objects are viewed in their givenness as independent entities, with fixed qualities in a specific time and place, without paying attention to the systemic relationships of interaction and the processes of their emergence and change. This view has been criticized by Whitehead (1997 [1925]: 51) as a fallacy of misplaced concreteness, as the abstractions – the names of objects – are confounded with concrete reality that actually consists of processes rather than static entities. Theoretical abstractions, on the other hand, focus on the systemic relationships of interaction between diverse objects in which individual objects manifest properties that they do not have outside the system (Davydov, 1990: 90-91; Ilyenkov, 1982). Such system-forming relationships of interplay and complementarity are revealed through historical analysis and practical experimentation. Rather than verbal definitions, theoretical concepts exist as methods and models that are used as intellectual instruments in special kinds of thinking actions. According to Davydov (1990), 'to have a [theoretical] concept of a given object means to be able to mentally reproduce its content – to construct it' (p. 91). In other words, it means an ability to reproduce the development of an object or phenomenon that the concept denotes in all its systemic and functional interconnections. Theoretical abstractions are generative in the sense that they enable moving mentally in time from the here and now to the past and to the possibilities of the further evolution and change of the system by revealing the principle of its functioning and development. These principles can be applied in various contexts as instruments of design, experimentation and learning.

The process of theoretical abstraction that leads to a theoretical concept starts from a contradictory situation, which forces one to question a prevalent belief or practice. Such a situation emerges when the development of some element of a complex system lags behind the development of the other elements, creating an inner contradiction within the system.

A new theoretical concept can be understood as a principle of resolving such a contradiction through a new way of mediating the interplay between the opposites of the contradiction (Ilyenkov, 2007). Such a new structure emerges typically as a local solution to a general problem. As Ilyenkov (1982: emphases in original) notes,

> Any new improvement of labour, every new mode of man's action in production, before becoming generally accepted and recognised, first emerges as a certain deviation from previously accepted and codified norms. Having emerged as an *individual exception* from the rule in the labour of one or several men, the new form is then taken over by others, becoming in time a new *universal norm.* If the new norm did not originally appear in this exact manner, it would never become a really universal form, but would exist merely in fantasy, in wishful thinking. (pp. 83–84)

The concept of the core competence of a corporation can be seen as such a new way of mediating between contradictory requirements, developed first as a local solution to a historically evolved, increasingly general systemic problem in strategy making, which we will explain in the following. However, it can also be used as a way to categorize existing competencies. Next, we will analyse the evolution of this concept, using the distinction between empirical and theoretical abstraction. After this, we will use the result of the analysis to explain the difficulties managers have in using the concept as an instrument in strategic planning.

Ilyenkov: Section 1.4. On the Relation of the Notion to the Concept

The dialectics of the relation between an individual 'thing' (that is, the object of a 'concrete concept') and that 'relation' within which the thing is this particular thing (that is, the object of the 'abstract concept') is a universal relation. This is a manifestation of the objectively universal fact that there are in general no things in the world that would exist in isolation from the universal links-things always exist in a system of relations to one another. This system of interacting things (what Marx calls concreteness) is always something determining and therefore *logically primary* with regard to each separate sensually perceived thing. The extraordinary situation when 'relation' is taken for a 'thing', and a 'thing' for a 'relation', arises precisely due to this dialectics.

A system of interacting things, a certain law-governed system of their relations (that is, 'the concrete') always appears in contemplation as a separate sensually perceived thing, but it appears only in some fragmentary, particular manifestation, that is, abstractly. The whole difficulty of theoretical analysis is that neither the 'relation' between things should be regarded abstractly, as a specific independent object, nor conversely the 'thing' should be viewed as an isolated object existing outside a system of relations to other things, but rather each thing should be interpreted as an element or moment of a certain concrete system of interacting things, as a concrete individual manifestation of a certain system of 'relations'. (…)

The concrete (and not the abstract) – as reality taken as a whole in its development, in its law-governed division – is always something primary with respect to the abstract (whether this abstract should be construed as a separate relatively isolated moment of reality or its mental verbally recorded reflection). At the same time any concreteness exists only through

its own discrete elements (things, relations) as their specific combination, synthesis, unity. That is exactly why the concrete is reflected in thought only as a unity of diverse definitions, each of which records precisely one of the moments actually distinguished in its structure. Consistent mental reproduction of the concrete is therefore realised as 'ascent from the abstract to the concrete', that is, as logical combination (synthesis) of particular definitions into an aggregate overall theoretical picture of reality, as movement of thought, from the particular to the general.

Section 1.6: The Concrete and the Dialectics of the Universal and the Individual

In reality it always happens that a phenomenon, which later becomes universal originally emerges as an individual, particular, specific phenomenon, as an exception from the rule. It cannot actually emerge in another way. Otherwise history would have a rather mysterious form.

Thus, any new improvement of labour, every new mode of man's action in production, before becoming generally accepted and recognised, first emerge as a certain deviation from previously accepted and codified norms. Having emerged as an *individual exception* from the rule in the labour of one or several men, the new form is then taken over by others, becoming in time a new *universal norm.* If the new norm did not originally appear in this exact manner, it would never become a really universal form, but would exist merely in fantasy, in wishful thinking.

In the same way, a concept expressing the really universal, directly includes in it a conception of the dialectics of the transformation of the individual and the particular into the universal, directly expressing *the individual and the particular* which in reality, outside man's head, *constitutes the universal* form of development.