Categories of Capital
and their values

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This paper reflects on forms of capitals. Or more precisely, better, it reflects on reasons and purposes of distinctions between capital categories. These reflections are based in our socio-economic theory (Moldaschl 2007). For the context of urban design and city development, I apply them here on built infrastructures. Does it make sense to introduce the concept of 'built capital'?

Categories of capital

Ignoring some historical cases and authors, a broader use of the capital category beyond the financial sphere began mainly in the 1980ies. Theodore W. Schultz published his book “Investing in People” 1981, using the category of human capital. In was not only well-recognized because he had been awarded with the Nobelprize for economics two years before. He offered a new explanation what had changed in the economy res. the developed economies after world-war II, arguing that investments in knowledge production and human capabilities had become more and more relevant compared to investments in material extracting and machinery, and finally became more important than the latter, especially as a factor of growth. Of course, that’s more or less what Karl Polanyi had diagnosed in just before the end of WWII in his “The Great Transformation” (1944, ch. 10), but in other words and without the credibility capital of a Nobelpriize-winner.

Interestingly for the issue of urban studies and urban design, the concept of social capital had its origin in this context, mainly introduced by the Canadian journalist and activist Jane Jacobs. In her book ‘The Death and Life of Great American Cities’ (1961) she used it for a critical purpose. Due to the dominating rationalist, expertocratic and male-dominated culture in processes of contemporary “city renewal” in the US, the needs and the potentials of inhabitants and neighbourhoods were almost ignored, she argued. Their social capital, the interpersonal relations, trust and ability/willingness to cooperate, would not be considered and used, more often destroyed, as well as diversity. The attention for the concept raised considerably in the 1980ies and 90ies when the sociologists Pierre Bourdieu (1977) and James Coleman (1982, 1990) brought up their social theories in which social capital played a relevant role. Compared to the ‘positive’ value the capital category had in the work of Jacobs and Schultz, the value was ambivalent (Coleman) or negative here (Bourdieu). In social capital both independantly saw a possible explanans for the reproduction of social inequality observed in their societies despite the expansion of tertiary education and democratised
access to education. In the work of both social capital is seen from an individualist perspective (a person has relations), which is different to Jacobs more social, ‘collectivist’ notion, and surprising in the case Bourdieu which may only be explainable by his purpose.

Starting from his interest in inequalities and their expression in daily culture, Bourdieu (1986) also introduced the categories cultural and/or symbolic capital. Unfortunately, he was not clear about the wording or distinction, and used it more or less alternatively. As typical for socioeconomic, evolutionary thinking, his text begins with the words: “The social world is accumulated history”, implying the idea of path dependence and to see these capitals as ‘social structure’ too, as objectified power relations. In this case in three forms: embodied, objectified and institutionalised social structure. The first comprised in his concept of habitus: embodied styles of behaving, speaking, dressing up, consuming, etc., all of them with distinctive symbolic potential, signalling origin, status and class, and thus channelling out access to power and resources - for the superior. The second mainly means status goods, referring to Veblen’s ‘conspicuous consumption’. The third, institutionalised cultural capital means credentials accepted by the public, like academic or other titles. Especially objectified and institutionalised cultural capital offer potential to convert them in other “forms” of capital.

While the three forms of capital defined above are seen as intangibles, so as immaterial capital (which can be doubted) natural capital is something mainly physical. The term was, paradoxically only at a first glance, not introduced by neoclassical thinkers, but by their critics. For (neo)classical economists it is normal to see everything in the environment of a rational actor as a resource. So, nature is seen here as a production factor, to be decomposed as a sample of separate resources like soil, water, plants etc., ready for use if the property rights are clarified. The category of nature capital was, as far as we know, initially used by the German growth-critic Ernst F. Schumacher in his famous book Small Is Beautiful (1973). His motivation was the same as the intention of following growth critics and ecologists in the emerging fields of bio- and ecological economics (e.g. Daly 1977, Jansson et al. 1994): It was and still is clearly defensive: defence against the pure consumption of nature, against a merely consumptive understanding of nature, and against pure economic logic as an ideological background. They want to protect nature by emphasizing the systemic nature of nature, and to reveal the reproduction cycles to be respected if nature shall deliver the ecosystem-services which economy and society expect from it in the long term.

We should not forget the “mental model” for this increasingly exceeding use of the capital category: the capital category that needed neither a prefix nor an adjectival specification yet was financial capital. In economics its conceptualized as one of the three production factors besides land and labor. As such it is not only conceptualized as a stock of money, but as a collective name of property in which the money plays a role. As invested money it represents all means of production: machines, buildings, transport systems; long-term consumptive goods like houses, works of art etc., calculated in purchasing or current reselling prices), property rights (e.g. land titles, patents), bonds and other securities. While economics today understand capital as something finally physical, Marx defined it as a social relation, and more specifically, as a power relation. Owners of capital can employ, apply, instrumentalize persons without capital for their own purposes by paying them (with a part of the value they create). But only if and as long as society defines property rights as it does, and as long people trust in the value of money or a currency. As long as this is the case, capital has the pleasant ‘property’ to accumulate. This only as a short comment on the unquestioned “materiality” of financial capital.
Definitions, functions and costs

As we saw even in this very short summaries, definitions of (scientific) categories are not independent from the purposes they pursue. To say it in the cost-benefit-logic: each definition achieves something on the cost of something else; typical trade-offs. The same comes true for the purposes themselves. Pursuing one target never causes only target-related effects.

What I described for the ecologist’s use of the natural capital concept is in general what we intended to effectuate with our own “polychrome” capital approach: a (re)valorisation of real-world entities we see endangered. Consequently, it runs into the same dilemma, suffers the same ‘perverse’ consequence: To subsume the entities we want to defend against ruthless economic claims under the same spirit that motorizes these claims. A dangerous, paradox strategy: Fight against economic imperialism by adopting its inner logic. About this contradiction and how we deal with it I wrote some reflections in my text on anthropocentrism.

Theories versus concepts

In my collection of capital concepts above I only listed a limited number of those broadly accepted today and being substantiated more or less in profound theories. But there are many other uses of the word, to avoid to talk about concepts or categories. Some for instance speak or spoke about individual capital (resources a person "has"), organizational capital (the same for organizations), architectural capital (the composition of org. capital), public capital (mainly infrastructure), academic capital (basically a fraction of what Bourdieu called cultural capital), instructional capital (capabilities of teaching persons), intellectual capital (sometimes knowledge, sometimes property rights for knowledge products, brand names), alike knowledge capital; mental capital (ideas, individual and social/collective capacities), psychological capital (the same only for individuals, more on the side of health and resilience), conceptual capital (ability of intellectuals like artists to create meaning, style), religious capital (faith: people still believe what popes pray; or investments in one’s own faith; or mastery in religious practices); manufactured capital (the ones organisations most commonly report on), design capital (capacity of designers, or designed products), … Shall I continue empirically? Why not talk about resistance capital (if it is not against me – otherwise I would classify it a barrier), military capital, child capital, kitchen capital, garden capital, broccoli capital (how many – I love them - are left in my fridge?), etc.?

There is a parallel to another related scientific issue, in pedagogy and psychology as well as in administration-science and strategic management: a diagnostic of hundreds, if not thousands of (different!) capabilities (or competencies or core-competences or key-competences or capacities or abilities) of people and organizations. If firms apply an outcome of these classifications in their recruitment processes, they have to “test” candidates for 60, 100 or more capacities. Funny. In Strategic Management-research they alternate between meta-capabilities of a complete firm, e.g. to configure all needed resources in the best way, or to be able to adapt to any change (“dynamic capability”), or they ascribe to any observable capacities.

1 That's, by the way, the reason why I use the term financial capital and not economic capital. The revalorization arguments claim economic relevance also for social and human capital, for instance (not merely, of course). Relevance in terms of investments as well as outcomes.
operation a related ability e.g. “the competence to make fact-based decisions in decision making processes on budgets in the department level” (this and other trouvailles drôles in Moldaschl 2007).

A said above: concepts follow purposes. In a theory concepts have to relate to each other in a clearly defined framework of substantiated assumptions. Concepts can be defined ad-hoc, what we often see e.g. in management science, when authors based on one or some empirical studies say: There are ‘three modes of management’ or ‘five success factors’, or, ‘group building has always five stages: forming, storming, …’ (its mostly three to five somethings; its for managers). They can just claim that and throw it on the market. A theory doesn’t allow taking such short-cuts. Here the requirement is to define the used categories aligned with basic assumptions. Furthermore, we expect from a theory that it is less complex than reality, that it provides arguments about what is more relevant than something else, and hence reduces the dimensions to observe systematically. Thus: everyone can use or create any concept for his purpose of study, if he or she does not need a theoretical substantiation and has no intention to have it generalized. If, instead, the claim is to have a theory-base and to benefit from its theoretical resources, that has also come costs, mainly limitations.

For the sustainability discourse I would conclude: It is good to have a limited, but substantiated set of basic concepts with defined relations, not only for theoretical, but also for pragmatic reasons. Of course: that’s a constructionist argument, pretty different from the positivist type of substantiation: There are four types of capitals …

**Built Capital**

One question in our research group on sustainable urban development was if it makes sense to add to the presented “forms” of capital, since it is the main physical object we have to do with, and the quintessence of path dependency. In some German cities, for instance, we can still visually identify from above structures which date from roman supply routes, forts and settlements, beginning already two decades BC. Hence, we would detach it from the usual understanding in political economy and the social science. I would split my reflections on that in two layers with different logics: theoretical and pragmatic, plus a synthesis.

(1) Obviously, and unlike its “pure” and quasi virtual form as Money, all other “real” forms of financial capital, have the ‘disadvantage’ to have longer circulation periods, thus to be less mobile, available, agile, convertible. That also means, at least for investors, traders, or speculators, less use-value. Usually it implies “transaction costs” to sell e.g. real estate and thus to reconvert concrete into coins and notes, cash or credit. On the other hand, the only way to increase capital, except loaning, is by converting, hence investing it: in human capital (paying people for ideas or physical work), in works of art, in buildings, in shares of firms, et cetera. Unfortunately, and unlike advertising fantasizes (‘let your money work for you’), it is not a genuine, inherent, magic property of capital to grow. Capital as money is dead. It can only grow if someone works with it, converts it, and thus makes it circulate, e.g. a merchant, a manufacturer, a real-estate firm, etc.). No difference if private or public capital. City infrastructures are a good example of the inner interdependence of financial assets through circulation: Tax systems for instance, immaterial legal infrastructures, have strong and sustained effects on built infrastructures.
Therefore, in modern economies cash is quantitatively the least significant “Physical State” of financial capital. To take it as the true or referential characteristic of financial capital, while giving the less mobile forms other names, is at least not compelling.

What about path-dependence in general? As we understood Bourdieu, the inertia of social structures was his main concern, as long he saw the ruling power relations as unjust and unfair. Nature was not his main concern at that time, but he perceived the institutionalized symbolic and embodied social structures in no way as “sustainable”. And if we refer to the understanding of social capital the World Bank elaborated based on many commissioned empirical studies since 1990ies about conducive and obstructive factors for economic development, they identified it as a central factor. Especially in cases where development loans or investments had no igniting effect. Conclusion: all social relations, down to the in persons embodied ones, are path-dependent. That's I a common, not a distinctive characteristic.

A last check: How will a long-term owner, e.g. a community or a state, not a speculator probably “operationalize” his built assets for management? I presume: at first in financial requirements for maintenance and modernization.

(2) From a pragmatic design perspective, spatial, temporal and climatic properties of a city infrastructure that had emerged over time, or are genuine, can play an important role in the opportunities and restrictions for redesign. That a city, for instance, has a long waterfront with a high density of buildings in a flooding-risk zone, may only in some cases (e.g. real estate value) be described meaningfully in terms of financial capital.

This could either be done in terms of natural capital - while all capital dimensions must include the ‘low’ side, interpretable as restriction or boundary. Or in terms of symbolic capital, if the aspect concerned is relevant for a city’s identity. Or otherwise better with another than a capital approach, because those are made to valorize things for bargaining, dealing with contradictions (loss of Mangroves by damming for resilience) and decision making, not for other purposes, where they would not reward their application.

(3) As a synthesis: For pragmatic reasons almost ‘anything’ goes. A combination of indicator systems and balancing modes would be no problem. If there is no need for theoretical consistency. If the latter is needed or desired by any reason, options have to be evaluated.

In the case of our capital approach the latter would easily be achieved by a change in the categorial level. Since capital here is a summative category, consisting of and operationalized by observable resources, all interesting properties of built infrastructures can be taken into focus on this level.

To be able to address this variety at was a fundamental premise in the construction of the approach: We assume that each of the resources has a peculiar character and its genuine value (cf. e.g. the tables on different resources and reproduction logics in our presentations). As in the case of natural capital: water has other properties and reproduction cycles than trees or birds. Thus, they cannot be treated in the same way, require other managing principles if to be managed by man. Human capital: health is something else than a professional capability, needs other care and investments. The recognition of variety is a characteristic of socio-economic thought, and a reason why an evolutionary approach comes
to other conclusions about the convertibility and commensurability of capitals than a rationalist approach.

Final Question

In all the new conceptions of intangible capitals we can make a strange observation: the overarching capital category itself remains mostly exempted of reflection. In many cases an etymological hint concerning the origin of the word in headcount (lat. caput: head), meaning the number of animals a person or community has. In my view, that’s the main reason why these concepts remain somehow mysterious and veiling. The very question is, since 400 years of economic discussion: What is the source of value and wealth?

Instead of starting a new discussion I’ll just resume the answer our theory. The answer is anti-Physiocratic and Ricardian: Work. To build up ones personal human capital one has to work: training, reading, repeating, etc., all that in time, as work is defined in physics. In order to have social capital one must create (what one cannot inherit) by work: build up and maintain social relationships. Meet, communicate, share, help, refrain from opportunistic action to create trust in the long term, et cetera. That’s why people rarely have more than three, five or eight good friends. Or they had, until the efficiency of making friends exploded by the factor 100 or 1000 through “social” networks. It is obvious how this works e.g. for financial capital too. At any rate, this Ricardian definition would be the only available common denominator for any serious convertibility efforts.

There is one exception only among the discussed capitals, and a fundamental difference: natural capital. Air, water, trees, genes etc. are not man-made. Or have not been. But this difference diappears more and more in the antropocene. There is less and less nature untouched, undesingned, unused, unransacked by man. Sand, for instance, as a natural resource for construction purposes cannot be found anymore in a “natural form”. Beaches world-wide contain at present between 1 and more than 10 percent crumbled plastic. Sea water approaches these shares. We now must invest more and more work to recreate and create nature, and to simultaneously protect it against our interventions.
Some References


