Defining the Commons:

The social practice of commoning as core determinant

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1. Introduction

The age-old notion of the commons seems to become more and more popular. This has certainly to do with E. Ostrom's prize in 2009 but also the multiple crises can be said to have increased the interest in alternative ways of social organization. However, different advocates as well as critiques operate with a range of different understandings of the term commons. E. Ostrom and her colleagues and also scholars of Resource Economics often define a specific type of goods as common pool resources which serves as a synonym for the term commons. According to this definition, commons are those goods that depict a high subtractability of use and where it is highly difficult to exclude potential beneficiaries. Mainly in social movements and critical discourses rights-based or normative definitions circulate. Something is declared a commons if the current arrangement of control over the resources in question are claimed not to be in accordance with the rights of some people and/or normatively wrong (i.e. because they lead to exclusions, destruction of nature, exploitation etc.). Further, common ownership or common property regimes are sometimes referred to as commons. Commons would thus be something that belongs to a group of people. Others link the notion of commons to a social practice named commoning. This practice is supposed to be the core of what makes commons what they are.

In many of the introduced conceptualizations, which often-times remain rather implicit and almost inarticulate, the possibility for something to act as a commons is either limited by definition (i.e. the goods definition) or emphasized for some specific fields considered especially important (i.e. rights-based and normative approaches). This paper shall critically reflect the foundations of different conceptualizations. The focus will lie on the deconstruction of the goods-based definition and the formulation of a different way of conceptualization of the commons based on and going beyond approaches that link commons to the social practice of commoning. This poses the problem of shifting the conceptual burden towards the term commoning. Commoning is a frequently used term for which a systematic conceptualization is not known to the author.

The author is an economist from Germany, building his argumentation on the critical and (in the positive sense of the word) utopian strand of literature concerning the commons. This literature can, to a considerable degree, be found on the edge or outside of the academic field and this paper also aims at presenting these ideas to academia. The main idea is that

traditional as well as emerging commons (i.e. in the digital realm) depict a logic that is different from the currently dominant capitalist logics. This commons-logic can thus be thought of as potential foundation of a different form of society which the author envisions as supposably better than the current.

After this introduction the paper presents the commons as a concept that dates back several centuries (chapter 2). Based on this, the conceptualization of commons as common pool resources shall be analyzed and criticized for its naturalization (chapter 3). The underlying classification of goods shall be reformulated in terms of categories of use (chapter 4). When this is done, two different conceptualizations shall be discussed (chapter 5) on which the conceptualization proposed in this paper will rest (chapter 6). This commoning-based conceptualization will be followed by a first attempt to also formulate of what commoning is comprised of. The conclusion will wrap the argumentation up and put the argumentation into a broader context (chapter 7).

2. Commons as an Ongoing Long-lived Concept

In the English language the term *commons* exists as a noun to describe something that is held / used within a community or rather shared by all or many (from Proto-Indo-European **ko-* [together] and **mei-* [exchange, share]). As an adjective the term *common* can be found in expressions such as *common ground*, *common heritage* or *common sense* which signals that the ground or the heritage belongs to the general public and that the sense is held in common. Linebaugh (2008) also gives account of a verb form to common used at least since the early modern period. He cites the English judge Edward Coke, who wrote with reference to the Magna Charta and Charta of the Forest: "Generally a man may common in a forest" (Coke 1650, as cited in Linebaugh 2008: 79) which describes, according to Muhl (2013: 36), the use and accordingly the cultivation of a commons.

Commons are an age-old concept – Linebaugh (2008: 9) refers to humanity's „several millennia of experience". Helfrich et al. (2010:4) refer to the late Roman Codex Justinianus (529 AC) in which a distinction is drawn between *res privatae* (private thing/matter), *res publicae* (public thing/matter), *res nullius* (nobody's thing/matter) and *res communes* (common thing/matter). It puts in order the different control rights or factual physical control.

Zückert (2003: 1) argues that, due to the productivity level of the time, in the Middle Ages (central European) societies consisted of communities. The individual was incorporated into those communities which limited his individuality but at the same time gave him or her more possibilities to unfold than the unbound (ibid.). The core of those communities, Zückert argues, was common ownership and common facilities (ibid.: 5). The increase in productivity in the course of an intensification of agriculture made common ownership obsolete (ibid.: 2). In 18th century England commons were still wide-spread. Linebaugh (2012: 102) reports that "[h]alf the villagers of England were entitled to common grazing" and that in many cases the "whole family commoned. It provided subsistence, a safety net against unemployment or low wages, and social security for the old" (ibid.).

Exner and Kratzwald (2012: 50) claim that capitalism could only be established through the enclosure[1] of the commons. It came along, they point out, with the "disciplination and

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[1]   Linebaugh (2012: 114) describes enclosure as a "term that is technically precise (hedge, fence, wall), and

criminalization of the commoners as well as with resistance against it" (ibid.; translation J.E.). This was also the case in earlier (and later) enclosure movements (cf. ibid.; Linebaugh 2008: 269ff.; Nuss 2006). Polanyi (1944: 35ff.) describes the enclosures as increasing the productivity of the use of land in some instances and as being necessary for the spread of the market economy.[2] Suddenly the economy had become controlled by markets and like never before "gain and profit made on exchange played an important part" (ibid.: 43). This resulted in a situation in which "social relations are embedded in the economic system" (ibid.: 57) and not the contrary.

E. Ostrom (1990: 58) described commons as "long-enduring, self-organized, and self-governed". These include high mountain meadows in Switzerland (ibid.: 61ff.) and forests in Japan (ibid.: 65ff.), irrigation systems in Spain (ibid.: 69ff.) and in the Philippines (ibid.: 82ff.). Some of the institutions of communal use date back several centuries. Ostrom managed to derive a number of design principles (ibid.: 88ff.; or best practices, cf. Ostrom 2010: footnote 5) as common features of the success stories that could explain the failed cases she analyzed. She and her colleagues mainly focused on cases within the fields of "fishery, forestry, irrigation, water management and animal husbandry" (van Laerhoven & Ostrom 2007: 8).

In recent years, new forms of commons seem to evolve – or at least are subsumed under this label. This includes different forms of internet culture and sociality, like Second Life (Bruns 2008), knowledge-based commons such as Wikipedia (ibid.) and intellectual property rights (Boyle 2008), but also more material endeavors such as urban gardening (Schützenberger 2014) and community-supported agriculture projects (Neumüller 2012). It can be concluded that commons is a very old concept that is applied to a variety of different (partly very recent) phenomena. Having this in mind it is now time to have a critical look at different ways of defining commons because there has not been said much about this yet.

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expressive of concepts of unfreedom (incarceration, imprisonment, immurement). He uses the term as antonym to the commons (ibid). Even more generally speaking, one could say that enclosure describes the act of limiting access over the heads of others.

[2] With reference to African and Latin American cases, Obeng-Odoom (2015: 5) asserts that in recent times, the argument for privatization "is framed around efficiency: the commons are inefficient; their enclosure leads to greater efficiency."

3. Commons as Common Pool Resources

As E. Ostrom is the most prominent researcher of commons, we shall start with her writings. In her seminal book "Governing the Commons" (E. Ostrom 1990), she studied what she called common pool resources. She did not distinguish those from commons and uses the two expressions synonymously (E. Ostrom 2001; cf. Hofmokl 2010: 228). Thus, it seems safe to assume that she regards commons as a specific kind of goods. This interpretation shall now be explicated and criticized.

E. Ostrom declared that the term common pool resources (CPRs)[3] describes „a natural or man-made resource system that is sufficiently large as to make it costly (but not impossible) to exclude potential beneficiaries from obtaining benefits from its use" (E. Ostrom 1990: 30). Secondly, CPRs are said to have a high "degree of subtractability of one person's use from that available to be used by others" (E. Ostrom, Gardner & Walker 1994: 6).[4]

CPRs are constructed against other types of goods. It is therefore useful to examine what shall be called the conventional classification of goods, which has become a standard classification in economics, and to a lesser extent in political sciences. The classification has its roots, as many other neoclassical economic concepts, in the writings of Samuelson. He distinguished between private consumption goods and collective consumption goods (Samuelson 1954: 387). The difference between those two types of goods, he claims, is that the first "can be parcelled out among different individuals" (ibid.) whereas the latter is enjoyed commonly "in the sense that each individual's consumption of such goods leads to no subtraction from any

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[3] The term common property resource is sometimes used as a synonym to common pool resource. E. Ostrom (2003: 249; e.i.o.) objects to this: „Using *property* in the term used to refer to a *type of good* reinforces the impression that goods sharing these attributes tend everywhere to be produced and allocated through the same property regime." The idea of commons property regimes to be congruent with the notion of commons can also be opposed from a property-critical position (cf. Nuss 2006) with the argument that property as such is neither a natural concept nor is it constant in history and/or across cultures. Thus, to base the definition of commons on such a concept would seem rather problematic. Due to a lack of space, however, this argument cannot be explored further at this point.

[4] The "process of appropriating resource units from the CPR can be undertaken by multiple appropriators simultaneously or sequentially" (E Ostrom 1990: 31). Joint use and joint appropriation of the resource units is ruled out by E. Ostrom (ibid.). The finite *resource system* is defined as a (reducible) stock variable and the *resource unit* is the corresponding flow variable (ibid.: 30).

other individual's consumption of that good" (ibid.). Little later, Musgrave (1957) introduced a different distinction criterion. He wanted to distinguish goods according to the possibilities to exclude others from using it. With Buchanan (1965) clubs could be introduced as a new type of goods from which people can be excluded and where the use diminishes the value for others. V. Ostrom and E. Ostrom (1977) combined the two classifications to a 2x2 matrix and added common pool resources in the empty spot (see table 1).[5]

	High subtractability of use	Low subtractability of use
High difficulty of excluding potential beneficiaries	CPR / Common good	Public good / Collective good
Low difficulty of excluding potential beneficiaries	Private good	Toll good / Club good

Table 1: Conventional classification of goods (cf. Adams & McCormick 1987: 192 and E. Ostrom 2010: 645).

Subtractability of use is regarded as high if the use of the good reduces the resource system. According to E. Ostrom (2003: 262) "High levels of use of a common-pool resource can lead to its congestion, degradation and potentially to its destruction. High levels of consumption of a public good, such as knowledge or national defense, do not have the same adverse consequences." Excludability is the simpleness or inexpensiveness of excluding others. With reference to Mancur Olson, E. Ostrom (2003: 261) declares that this criterion is the "most important theoretical distinction to be made among goods".[6]

As examples for private goods apples and bicycles can serve. It is easy to exclude others and using them reduces the possibilities of use for others. Private golf clubs can be taken as

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[5] V. Ostrom und E. Ostrom (1977) further replaced the dimension rivalry of consumption with subtractability and conceptualized the dimensions as continuous (high / low) rather than binary (existent / absent) (cf. Adams & McCormick 1987).

[6] Buchanan (1965: 13) declared that the theory of clubs would be "in one sense, a theory of optimal exclusion, as well as on of inclusion". This can be logically extrapolated to the entire theory of goods. The aim was a political, it was to find the optimal role of the state. It was attempted to find a grand theory that could make predictions about which goods should optimally be provided by markets and in which cases markets would fail (cf. Samuelson 1954: 389; Ostrom 2003: 240; Helfrich 2012a: 87).

illustrative for club goods – easy to exclude (i.e. fees) but little interference between users. Public streets and national defense are often referred to as examples for public goods. It is hard to exclude others and their use does not diminish other people's use. Common pool resources can be thought of as the fish stock in an ocean. It is hard to exclude, but the fish that somebody extracted cannot be withdrawn by another person. So it is said. What shall be demonstrated in the remainder of this section is that both criteria do not belong to the goods (as physical attributes), but are determined in the way people relate to it.

Ostrom (2003: 253) herself acknowledged: „whether it is difficult or costly to develop physical or institutional means to exclude non-beneficiaries depends both on the availability and cost of technical and institutional solutions to the problem of exclusion and the relationship of the cost of these solutions to the expected benefits of achieving exclusion from a particular resource." Other authors[7] take this argument further, Cowen (1985: 53), for example, argues that "nearly every good can be classified as either public or private depending upon the institutional framework surrounding the good and the conditions of the good's production."[8] As the institutional frameworks are subject to change, also the relation between humans and the goods can be regarded as essentially socially constructed and therefore changeable.

For the purpose of illustration the water of a mountain spring can serve. The water can flow down the mountain and become (part of) a river. Or it can be bottled and sold in a supermarket. In the first case it could be classified as a common pool resource, in the second case a private good. How hard it is to exclude other people does not depend on the good (water) itself, but on historical, social and natural conditions. In times of water scarcity, in which the institution of private property is not strong, exclusion may be more costly and conflict-laden than in times of water abundance and in a society where private property is

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[7] This includes Buchanan (1965: 13), who argued that "[p]hysical exclusion is possible given sufficient flexibility in property law, in almost all imaginable cases, including those in which the interdependence lies in the act of consuming itself."

[8] Cowen (1985: 53) argues that "[t]he institutional elements of importance may consist of such factors as (a) what technology is used to produce the good, (b) how much of the good is produced, (c) the distribution mechanism for the good, (d) how intense the demand is for the good, (e) how we define the marginal unit of the good, (f) what sort of activities we are willing to define as 'consumption,' and (g) the different meanings we are willing to attach the notion of exclusion."

sacrosanct.[9] Hence, the „costliness of exclusion is not a function of the nature of the good" (Cowen 1985: 61).

From the technical point of view it seems that virtually everything could be privatized, enclosed, made excludable at some point in the future (cf. Engel 2002: 52). The difficulty or costs of exclusion is a social dimension that crucially depends on the respective demand (over time), potential substitutes, technological options and "on how the good is supplied and at what levels it is produced" (Cowen 1985: 61). It also seems as if the exclusion of others would only be an aim (and therefore a relevant category) as long as one can expect profits from it. Excludability is, hence, essentially a social dimension. It "crucially depends on the concrete circumstances, on what we as acting individuals are capable of doing, and on our decisions" (Helfrich 2012a: 65).

In contrast to excludability, the second dimension, subtractability, seems to be more closely related to the physical materiality of the goods. Adams and McComrick (1987: 198) argued that „Cowen was correct to stress the institutional options with respect to excludability, but the degree of rivalry in consumption is a characteristic of the goods themselves, independent of the institutional setting." One can share an apple, but eating half an apple reduces the amount of vitamins consumed proportionally.[10] In contrast, sharing a poem does not reduce the satisfaction from consumption. The consumption of some goods seems to reduce the possibility for others to consume the same good (ibid.). However, the distinction is, even though in some sense natural, at best a gradual one (Helfrich 2012a: 62; Adams & McComrick 1987: 198).

However, the sharing of an apple can just create new utility (externalities) as it can satisfy, for example, social needs. It is also not inherent in the goods how they are used (or consumed). To come back to the example of the mountain spring: If the water is used for drinking purposes or during industrial manufacturing processes, the water is in a sense lost for

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[9] Buchanan (1965: 13) argues: "If the structure of property rights is variable, there would seem to be few goods the services of which are non-excludable, solely due to some physical attributes." For further examples see Cowen (1985: 59ff.).

[10] The question whether or not half an apple is enough for each of the two people and the implicit assumption that more is always better shall be noted but not discussed in detail, for the sake of argument.

everyone else.[11] If, however, the water is used to fill a lake for everyone to swim in, such reductions do not apply in the same way. It might even be the case that one person swimming in the lake is considered to improve the water use (swimming) of another person because that first person is considered to produce a nice atmosphere or creates the notion of safety (externalities). But even if there are no (positive) externalities involved, another person swimming in the lake does (if the lake is not overcrowded) not diminish another person's possibility of using the lake for swimming purposes.[12] Again, it is not the water that determines the excludability, but it is human action.

These examples shall point out that one has to be careful what to ascribe to a good and what to explain with social factors. It is certainly absurd to claim that the nature of the goods has nothing to do with the possibilities of using them in a non-subtractable manner.[13] This is especially the case if one limits the analysis to a certain, short time frame and not for example to the water cycle of several decades (in which water can be used for many different purposes if properly recycled, for example). Both the nature of the good and the natural environment have an influence on the degree of exclusion, but in the end, it is the manner of using the goods that determine whether or not the possibilities of other people to use the same good worsen.[14]

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[11] At least until the water leaves the body / the golf course and gets back into the water cycle. Then, further uses depend not only on the quantity but also on the quality of the recycled water. Polluted industrial water being discharged into rivers is an example for the quality issue.

[12] Hofmokl (2010) gives another example that supports this argumentation. In the case of proprietary software the owners restrict the access with certain licenses. As soon as the license is being granted, users can decide (within certain limits) how intensively they want to consume the software. She deducts from this, that proprietary software can be considered a club good. However, "open source software is both non-rivalrous and difficult to exclude. Therefore open software can be classified as a public good" (Hofmokl 2010: 236). She claims that it does not depend on the differences of the software but that the mere existence of licenses (a clearly anthropogenic restriction of access) leads to the situation that the software is a club good rather than a public good.

[13] The distinction between material (i.e. water) and non-material goods (i.e. knowledge) comes to mind at this point.

[14] E. Ostrom (2003: 243) introduces the differentiation of goods in terms of collective action problems. It could be interpreted that the different collective action problems determine the type of good (and not the natural characteristics). This would refer to the way people use the things as this could be framed as a collective action problem. In later writings, i.e. in E. Ostrom (2010), she returns to the classification of goods – and therewith to a definition of commons as a certain type of goods, however.

The conventional classification of goods can be criticized for suggesting that the differences between the types of goods stem from the different physical qualities of the goods. Commons would hence be objectively described as having certain attributes (subtractable and non-excludable). This has been criticized for being a false naturalization. If "low-subtractibles" such as free software (potentially exclusive) as well as free radio frequencies (rather non-exclusive) are commons and if "high-subtractibles" such as community-run irrigation systems (potentially non-exclusive) as well as the vegetables of a community-supported agriculture project (rather exclusive) are commons, then the conventional classification of goods does not serve to define what it a commons and what not.

Bennholdt-Thomsen (2012: 108) argues that commons, as a societal institution, have been subject to a neoliberal reification which does not address the binding character of commons but only the objects themselves.[15] It is not enough to look at the physical qualities of something in order to consider it to be a commons. Helfrich (2012a: 61) claims that commons "don't simply exist – they are created". It depends on the relations, the type of interaction, that people have with each other and with the goods[16] in question (Helfrich & Heinrich Böll Foundation 2009: 24). Accordingly, Muhl (2013: 36) argues that resources in general are not yet commons but merely components thereof. They only become commons, he claims, in connection with people or communities and their self-given norms and rules of use. He defines Commons as a social relation (ibid.).

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[15] Helfrich (2012a: 62) argues in this respect: "We determine the form of use and thereby also the classification of drinking water as a particular type of good – yet we have apparently lost sight of this fact in a gradual process of ontologization."

[16] Externalities are not included in the classification of goods. This clarifies the dependence of the classification on the question what belongs to a good. The seats in an airplane might be considered rival (subtractable) for a certain period of time – the noise of the plane, however, is not rival (Adams & McCormick 1987: 197).

4. Reformulating the Classification of Goods

As the conventional classification of goods is widely referred to and used it seems important to formulate an alternative. However, before getting started on this, the question what shall be classified exactly must be tackled. The conventional classification wanted to order goods – a deeply subjective category as will be argued below. Alternatively, one could speak of resources. It is important to note that in the Anthropocene each resource can be assumed to be produced, at least to a certain degree, by human action. Therefore, when the term resource is used in this context, it automatically refers to a matter that is also a product in a sense.[17]

In his critique on the subjective theory of value Brodbeck (2009: 759ff.) distinguishes between products and goods. Products, he argues, have "intersubjectively defined properties" (ibid.: 759; translation J.E.), which are publicly accessible as intersubjective identities through norms, habits, instruction manuals and so on (ibid.). The properties of products are communicated through intersubjectively communicated parameters (ibid.). Brodbeck claims that according to the subjective theory of value, goods are, in their quality, of a purely subjective nature - there is no explicit relation between the properties of the products and the subjective evaluation (ibid.). Hence, if something is a good (or a bad) for someone else cannot be observed. The category "good" seems inappropriate for the description of something that claims general validity – such as a classification.

The term resource, just as product, seems to be less of a purely subjective nature. It could roughly mean *matter that can be used*. However, also the use of this term has been criticized. Shiva argues that "[l]ike a spring, a 're-source' rises again and again, even if it has repeatedly been used and consumed" (Shiva 1992: 206). This implies the idea of a relation between nature and humans in which the first presents the latter with something. This is why the latter (humans) should take care of the first (nature) so that nature's generosity does not cease to exist (ibid.). According to Shiva, Industrialism and Colonialism have resulted in a conceptual turn which made nature mere input factors for the industrial production and colonial trade (ibid.). „In this view, the nature has been clearly stripped of her creative power; she has turned into a container of raw materials waiting to be transformed into inputs for commodity production" (ibid.). The shift of meaning shall be acknowledged at this point by regarding

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[17]   At the same time, products are always resources in the sense that they can be used for something.

resources not as something to be used (e.g. economically exploited) only, but as something that has been generated, borne, produced by nature and humans.[18]

The conventional classification has been criticized for disregarding social construction and for using the essentially subjective concept of goods. What shall now be launched is an alternative classification – a use-oriented classification of resources (see table 2) – so that not all of the analytical value of the distinctions are lost (it might even be increased) and that the theoretical soundness of the classification can be improved. Key to this will be to include human activity into the dimensions of distinction: exclusion and subtraction.

If the distinction between the upper and the lower row is not made according to the degree of excludability, but the degree of exclusion, the exclusivity of use, then the necessary shift of meaning can be achieved. On the one hand, there are those resources that are used in an exclusive way (without the consent or even against the will of those excluded) accessible only to a limited number of people while excluding others. On the other hand, there are the resources that are in principle open to everybody. The dimension of subtractability can be modified in a similar, use-oriented, way. It seems coherent not to distinguish according to the degree of subtractability, but according to the degree of actual subtraction. Resources could be divided into those being used in a subtractive manner and those used in a neutral or even additive manner. The crucial question is whether or not the possibilities of use are reduced, stay the same or are enhanced.[19] A classification based on these dimensions could be illustrated as follows:

	Subtractive use	Neutral or additive use
Exclusive use	Private resource	Club resource
Inclusive use	Common resource	Open-access resource

Table 2: Use-oriented classification of resources

According to this classification, private resources are the ones that are used in a subtractive

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[18] This does not mean that the term resource is limited to so-called renewables (regenerating by non-human processes).

[19] Both criteria are obviously subject to interpretation and subjective value judgments, but on the one hand every classification suffers from this and on the other hand making this explicit and making the categories that need to be judged well-formulated can be seen as an improvement relative to the current state of affairs.

and exclusive manner whereas club resources[20] are used in a neutral or additive and at the same time exclusive manner. Commons resources would be the ones used in a subtractive way but inclusively and open-access resources would be the ones used in a neutral or additive manner and inclusively. The idea behind this is that seeds can be used to plant something new (additive use) or can be eaten (subtractive use) just as a hammer can be used to build a house as well as to destroy one. The person wanting to eat the seeds can be open for sharing (subtractive and inclusive use of seeds: common resource) or not (subtractive and exclusive use of seeds: private resource). The person constructing a house can appreciate help (additive and inclusive use of the hammer: open-access resource) or not (additive and exclusive use of the hammer: club resource). The house can be used as private property for some people or it can be used to host those in need. The concrete use of resources is the decisive aspect. Just as in the conventional classification of goods, the dimensions referred to here are not to be understood as binaries but as a tendency or a degree.

If somebody wants to take a picture of an apple this would be a neutral use and if that person does not prevent other people from doing the same this would be inclusive use. If someone else wants to eat that apple (subtractive use) and if that person does not want to share, it would be exclusive use. There is a conflict that might be resolved in the way that one takes a picture first and the other eats the apple afterwards. If both want to use it subtractively, there might be a conflict if they do not want to share. This, however, is not on the part of the good but rather on the part of the users. They could, for example, agree on planting more apple trees so that such problems would not occur in the future. Hence, this use-oriented classification of goods allows making explicit what the conflicts are about, other than the conventional classification, that tried to determine in which cases what kind of use is best (see footnote 5). This is achieved by looking at the resources in their institutional context (Cowen 1985) and in the way people interact with them. With this a different (more accurate) description of the status-quo can be achieved and conflicts as well as questions regarding the target states could be dealt with explicitly.

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[20] Club resources could be distinguished from toll resources by arguing that in the latter case the exclusion is achieved essentially through economic means.

5. Commons as a Conceptual Triad

The definition of commons as being a specific type of good was criticized for being a false naturalization. The argument was made that it ultimately depends on human activity, on human relations, whether or not something can be considered a commons. Therefore, what shall be looked at now are alternative conceptions of the commons that incorporate the social dimension in an explicit manner.[21]

Helfrich et al. (2010: 11) assume that common pool resources, or other resources (!), are a necessary condition for commons. This is what they call the foundation - there is no commons without some matter,[22] one could say. The second building block consists of people, the communities which are involved in, initiate, maintain, processes of using, creating and caring for the resource. „Resources are converted into commons by the people who collectively use them" (ibid.). Thirdly, the regulatory block „encompasses the rules and norms governing the management of the commons" (ibid.). Those rules and norms structure the relation between people among themselves and regarding the resources. Those rules may vary substantially across cases, but, according to Ostrom (1990: 93) the rules that have shown to be enduring and stable, and therewith well-suited, are rules that are determined by the affected people themselves. For this to succeed, "a collective understanding of how a resource should be managed" (Helfrich et al. 2010: 11) are needed. With reference to Linebaugh (2008) they call the "complex social process behind this" (ibid.) commoning, from which "emerge rules and norms which are to be negotiated in processes that are often conflict-ridden" (ibid.). Helfrich et al. (2012) summarize their approach as "resources + communities + rules & norms = commons" (ibid.).

Every form of action of several people includes people as well as tangible and / or intangible resources as well as rules and norms. This happens during a tennis match, communal

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[21] There are also normative and rights-based definitions of commons. Some statements of Barlow (2013a, 2013b), Shiva (2003) and Quilligan (2012b) can be interpreted in this way, for instance. The argumentation is roughly that commons are the things that we should have control over or those things to which we have a right to. Due to a lack of space, these conceptions shall not be dealt with in depth. The counter-argument is, in a condensed form, that normative claims do not make something a commons. It can be a political statement for what should be, but it cannot explain what a commons is and how it comes into existence.

[22] The term matter shall refer to tangible as well as intangible objects in this context.

subsistence agriculture, the profit-oriented mining of uranium, during music jam sessions and while lazing around. According to "resources + communities + rules & norms = commons", this would all be commons. If everything is a commons, however, the concept remains empty, without meaning. It seems to be essential what kind of rules are at hand and how the people that are involved actually interact with each other. If one person can decide about everything, it is hard to speak of common use. In this definition, the reference to commoning as the social process behind the collective sense-making seems to be too marginal to be able to function as main criterion of distinction.

A slightly different conceptual triad (Meretz 2012b) can solve the problem of indeterminacy by granting commoning a more central position. Also Meretz (2012b) starts with resources. Commoning, which can be described as 'doing together' of peers (which shall be enough as a first approximation – there will be more on this later on), is not only directly incorporated into the conceptualization but is at the very heart of it. This includes, according to Meretz (2012b), both communities and rules. The products which result from this creative interaction (resources and commoning), the transformed resources, can be said to be the final point. These products can be, in the next period of time, input (resource) for other processes of commoning (ibid.). Meretz accentuates with this conceptualization the productive and procedural character of the commons.

Meretz's conceptual triad does solve the problem of indeterminacy as it makes clear that commons must necessarily include commoning. There is another problem with Meretz's conceptual triad (which also applies for the first triad), namely what shall be called the problem of interdependence. The lack of clarity that shall be addressed with this problem is the fact that with certain means (commoning) different ends can be served, including ends that are heteronomous, other-directed. For example: It is (logically) possible to construct a dish washer (product) with the help of commoning and certain resources (metals, plastic, knowledge, time, language, etc.). This can be done so that the people that have produced it can use it or so that those people having produced it did it because they enjoyed doing it or because they want to give the product to other people. So far so good. It can, however, also be produced (through commoning) to be sold on markets. In a lot of cooperatives and other projects of the solidarity economy this can be observed. Those endeavors are highly dependent on the weal and woe of the markets. If commons are the "institutions resembling

neither the state nor the market" (Ostrom 1990: 1), or even "beyond market and state" (Bollier & Helfrich 2012: xiii), then this dependence on markets cannot be as large as both conceptual triads allow. Both triads are not inherently wrong, but they are not entirely convincing. However, with their reference to the social practice of commoning they provide a good starting point.

To be fair, one must mention at this point that neither Helfrich and her co-authors nor Meretz stick entirely to the definitions criticized here. Even in Helfrich et al. (2010) there is more to it than the simple reconstruction presented here. Nowadays, Helfrich prefers to refer to commons as a paradigm (cf. Bollier & Helfrich 2012: xi ff.). She also declared that it depends on the end of an endeavor, not on the form of the institution (Helfrich 2013b: 16). Meretz sees commons strongly in its societal context. He argues that commons are a seed form of a new form of society and potentially as a counter part of the commodity form (Meretz 2014a; see below). The arguments brought forward here serve to sharpen the notion of commons.

6. Commoning as Core Determinant of Commons

It has been argued that commons are not simply a type of goods but that there is more to it. Even though the two conceptual triads have been criticized for their vagueness, they do serve as an inspiration. In this section it shall be attempted to reach a more clear-cut conceptualization.

6.1. Commons as Social Form of Matter Determined by Commoning

In response to Hardin's (1968) well-known "tragedy of the commons" E. Ostrom (1990) showed empirically as well as theoretically that it is possible to find agreements that allow for a stable and enduring use of resources. She managed to do so by relaxing mainly one of Hardin's assumptions, namely the assumption that people would not communicate with each other. E. Ostrom (1990) argued that it is mainly a question of governance, and Hardin (1998) himself admitted his mistake by claiming that he had been talking about "unmanaged commons". Underlying this is a naturalist definition of commons, but the idea becomes clear. Something is only a "successful" commons if it is dealt with in an appropriate manner.

Acksel et al. (2015: 134; translation J.E.) formulated that commons can be described as "institutional, legal and infrastructural arrangement". Bennholdt-Thomsen (2012: 83) focuses on the relational aspect of commons: "Just as particles are not simply isolated bits of matter in quantum physics, commons are far more than the material of which they consist [...]. They are part of a web of relationships, both concrete matter and a process in motion, all in one." Meretz (2014a: n.p.; translation J.E.) highlights the procedural character of the commons which he describes as the "process of using and maintaining resources by a group of people who organize the social process, the commoning, themselves and determine the rules of their togetherness."

It seems as if commons could be said to consist of two things that need to be distinguished. First, it is something that is supposed to be the commons, some tangible and / or intangible matter (resource / product[23]). Second, there is some sort of social infrastructure embedding

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[23]   Resources are those tangible and intangible objects that are mostly subject to use or consumption whereas products are those things predominantly referred to as being produced. The former can become the latter and

the commons. This could be said to be the social form of that matter. The social form shapes the materiality of the matter.[24] It is the shape that a matter becomes if people interact (e.g. modify) with it in a specific manner. The social form is what people perceive when they see, think about, sense that matter. This happens on the level of individual, the micro-level, by people shaping and perceiving the matter in a specific way. The social form can be said to be shaped by a social practice, a way of doing things and relating to each other. The societal level, the macro-level, also needs to be included, however. On the one hand, the social practices (and therewith the social forms) form society, determine the quality of society. On the other hand, society shapes the social forms and practices. This happens, for example, by defining which social practices and forms are functional within a specific society or which are to be favored and which are to be hindered. The social form is what gives the matter its specific way of being. In capitalism, it is what Elbe (2010: 228; translation J.E.) calls with reference to Marx's writings "reified societal relations,"[25] as mediated and historically specific.[26]

According to Helfrich (2012b: 36) the social practice prevalent in commons is commoning. In this argumentation commoning would hence be the social practice (e.g. Schützenberger 2014: 131) that makes a commons what it is. The concept developed in this paper can therefore be formulated as follows: commons is the social form of tangible or intangible matter that is determined by commoning. Hence, a matter only becomes a commons if people

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the latter can become the former depending on how people relate to them. "Matter" shall include both, products and resources.

24 In order to make the subject-object divide less clear-cut (and ontological), a different formulation might serve better: commons as tangible or intangible matter that is predominantly interacted with in the form of commoning.

25 Reification can be said to be the case when objects seem to move the world (even though it is the social relations that ultimately do so). Objectification is the case when the way society is organized influences the social practices and forms. This is the case in all societies. Objectification is results in reification if people cannot determine the way their society works.

26 Hirsch (1994: 173; translation J.E.) defines social forms as "resulting from the general principles of sociation which pits the individuals against the objectification of their societal connectivity in a fetishized and reified manner". The particular manner can be said to be historical-specific, but the "objectification of their social connectivity" can also be found in the formulation proposed here. Objectification does not necessarily come along with reification.

predominantly relate to it by commoning. As this conception of commons heavily depends on commoning, it is now time to develop a more profound and clear-cut understanding of this social practice.

6.2. Commoning as Self-organized (Re)produsage and Mediation of Peers Who Aim at Satisfying their Needs

Acksel et al. (2015: 134; translation J.E.) describe commoning as follows: "Possibilities of individual self-unfolding merge with the search for common solutions, senseful activities with the deepening of relationships and the creation of material wealth with the care for other people and nature. This togetherness was and is exercised in different ways by communities all around the world. In doing so, commoning must be scanned, refreshed and (newly) practiced. This, in turn, is not at all self-evident and needs adequate surrounding conditions which we can find only to a very sparsely at the present time."

Commoning has been described as a social practice. The question that shall be tackled in this section is which characteristics this social practice has. Due to limitations of space this must necessarily be incomplete. At the same time it is important to note that there are necessary limitations to the empirical as well as the theoretical conceptualization of commoning. What can be perceived as commoning today is influenced by the society that this social practice is part of. It shall be assumed that as the commodity form is the basis (elementary form; cf. Meretz 2014b; 2014c) of capitalist societies, the commons form could be the foundation of a form of society, a commons society. Only in this society, the commons form would be an elementary form. In a different form of society (i.e. capitalist), the commons form can be at best a seed form and hence not depict its full potential, or in other words, commons can only be commons to full extent in a commons society. In other societies, there will always be some aspects that commons incorporate from that society and thus its degree of being commons is limited.

The same holds for the social practices determining the social forms. As long as they are in a "structurally hostile environment" (Meretz 2014a: n.p.; translation J.E.) they cannot unfold to full extent. In different circumstances different aspects of commoning can come to the surface, can become observable. Here, a first attempt shall be made to grasp commoning as

much as can be observed today. This means that in no specific empirical setting all of the dimensions will be observable. So, the task of getting to the core of commoning is a bit like assembling a yet incomplete mosaic. At the end, the picture might start making sense but it will not be finished.

Commoning shall be described as self-organized co-(re)production and mediation of peers who aim at satisfying their needs. This admittedly not very catchy (and in the above sense necessarily ideal-typical) conceptualization is the result of long discussions and several modifications. It is the result of empirical observations, of theoretical considerations and of inspiration from reading and listening to other people's works. It also roots in the assumption that commoning may be the foundation of a different form of society (cf. Meretz 2014a: n.p.) and therewith on the question what conditions such a social practice might have to fulfill. To the critical reader this compilation may seem quite arbitrary and questionable. But as there are no systematic conceptualizations of the term commoning, despite its widely spread use, consider this as a first attempt and potentially first step in the debate. And it should be kept in mind that, if the assumption holds true, than not only in the case of commons, but also in the case of commoning one must expect that what can be observed today can only be elements of commoning.

There will be no instance where commoning today will be what commoning might be in a commons-society, simply because the environment is not supportive. This compilation is thus an attempt to approach the ideal-type. The dimensions presented here can be found in very different instances of commoning, but compiled in this way, it shall be argued, it makes sense to describe them as the basis of a logic that is different to the logic of the social practices underlying commodity production (*commoditing* one could say). What shall now be done is going through each of the dimensions (produsage, (re)production, mediation, peers, self-organization, and needs-satisfaction) and arguing why each of the dimensions is a component of commoning. Finally, in the last paragraph, an argument shall be brought forward justifying the specific way the dimensions are assembled.

6.2.1. Produsage

If commoning is a social practice, it must be an activity. And just as matter has been described as comprising resources as well as products, the activity of commoning consists of

producing as well as using. What Quilligan (2012b: 76) calls "[t]o integrate producers and consumers" and is sometimes referred to as co-production, shall be called produsage here.[27] Ostrom (2005: 1) argued that her "extensive studies […] have repeatedly found communities of individuals in urban and rural areas who have self-organized to provide and co-produce surprisingly good local services given the constraints that they face." Quilligan claims that "[w]hen resource users are also co-producers, their motivations, knowledge and skills become part of the production praxis, leading to new ways of interacting and coordinating social and economic life" (ibid.: 78) and that "their local ideas, learning, imagination, deliberation and self-corrective action are embodied directly in their collaborative activities" (ibid.: 76).[28] This produsage (= co-production) can be observed, for example, in open source projects where the programmers are also users of their own programs and the users play a vital role in creating and improving the software. Other examples are community-supported agriculture as well as urban gardening projects where the people producing vegetables also consume some of the produce and the consumers also help planting and harvesting.

6.2.2. (Re)Production

Not only usage and production are important to describe commoning, also maintenance is crucial. Acksel et al. (2015: 134) mention these three dimensions in one row, as closely connected. Bennholdt-Thomsen (2012: 82) argues that "not only children, but adults as well cannot exist without being directly nourished and cared for, without being attended to and given gifts. Certain vital elements of subsistence, the ones that signify humanity, so to speak, cannot practically be commercialized." Care, or reproduction, is a vital element of human life, as is production (Meretz 2014a: n.p.). In capitalism, these two are pitted against each other as separated spheres each with its own logic (ibid.). "Commons, however, reflect people's understanding of the elemental conditions of nature and human life, not as tradeable

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[27] When writing about internet-based collective content creation, Bruns (2008: 19f.) coined the term "produsage" for the combination of production and usage. The reason for using produsage instead of co-production is that the former makes the integration of production and usage very clear whereas co-production might be read as producing together. This might, for example, be the case when Helfrich (2012b: 36) speaks of "co-producing users".

[28] As opposed to co-production in neoliberalism (i.e. designing the own jeans of a commercial brand), which can be said to aim at efficiency gains and at the end at profit maximization, Quilligan (2012b: 76) claims that „[w]hen consumers choose to become co-producers of goods and services through their own commons, however, their mutual, integrative work transcends the premises of neoliberalism."

commodities" (Bennholdt-Thomsen 2012: 83). Commoning seems to consist of reproductive and care activities, not only towards other people but also towards nature. In order for commons to be long-enduring (E. Ostrom 1990), having at least a certain extent of reproductive activities seems imperative. At the same time commoning has productive aspects which do not function according to a different logic, however. Commoning, one could therefore say, tends to integrate production and reproduction[29] – which is sometimes called (re)production – as well as production and usage – produsage. The term (re)produsage shall hence be used to describe that in commoning all three are integrated: reproduction, production and usage (cf. Euler 2015: 9f.).

6.2.3. Self-organization

With reference to Linebaugh and the Charta of Liberties (Magna Carta and Charta of the Forests), Wolcher (2009: min. 10:10) argues that commoning meant "expressing [...] a form of life in which autonomy and the ability to meet basic subsistence needs was something that was in the grasp of the commoners themselves, not something that had to be given to them by a superior authority." Hence, he argues that there was a high degree of autonomy accompanying commoning.[30] According to Quilligan (2012a: 104; translation J.E.[31]) "Self-determination with respect to the co-production and co-management of resources includes, thus, that people directly participate in the decisions about their means of subsistence and their well-being. This includes the right to reject external domination, enclosure, commodification and the destruction of a specific commons." The "decentralized, self-governing systems of co-production" (Quilligan 2012b: 76), E. Ostrom (1990: 2) uses the term "self-governing institutions", can be subsumed under the notion of self-organization.

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[29] As the separation of spheres is a societal category it is clear that on the micro-level the separation cannot be abolished to full extent. It can, however, be partially integrated by intentional action. In this way, the separation would be reproduced to a lesser degree than normal. Given that commoning does function according to a different logic it seems reasonable to argue that also the separation (which stems from the commodity logic) would tend to dissolve the more commoning there is.

[30] According to Wolcher (2009: min. 11:53) what the Charta of Liberties meant in their nearly forgotten dimensions was the following: "To common was to engage in a form of life in which you took your life, your subsistence, into your own hands and did not wait at the table for crumbs to drop from the powerful" (Wolcher 2009: 11:53).

[31] The two sentences cited here are missing in the English edition and have thus been translated from its German counterpart.

6.2.4. Peers

The identification of commoners as peers can be traced back (at the least) to Benkler (2001: 4), who researched "non proprietary production by peers who do not interact either through a firm or through a market".[32] Peers could be said to be "widely distributed, loosely connected individuals who cooperate with each other without relying on either market signals or managerial commands" (Benkler 2006: 60).[33] The "socio-economic system of production that is emerging in the digitally networked environment" (Benkler & Nissenbaum 2006: 394) has been named "commons-based peer production" (Benkler 2006: 60). The notion of peers is also used to describe what happens in not primarily digitally networked environment. Meretz (2014a: n.p.; translation J.E.), for instance, described the term peers in more general terms: "Peer refers to the coequality [equal status] of the involved people, which constitutes the foundation of self-organized, free cooperation". Reference can be made, for example, to Schützenberger (2014: 104), who argued that in the Viennese community garden she studied, the members attached importance to being equally heard and taken seriously. One of E. Ostrom's (1990: 93) design principles could be interpreted as pointing in this direction, too: "Most individuals affected by the operational rules can participate in modifying the operational rules." The further (actual) participation is realized, the more decision-making processes must be based on the coequality of the involved, one could argue. Acksel et al. (2015: 134; translation J.E.) take this idea one step further by arguing that "[t]he rules of commoning are (ideally) defined by peers in a togetherness on an equal footing".

6.2.5. Mediation

As has been described above, social practices shape and are shaped by society. This must also be considered when conceptualizing commoning. For this purpose it is useful to see societies

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[32] Benkler (2001: 4) claims that "once one begins to look for them, such projects are ubiquitous, robust, and extend to all types of information production and exchange" and "free software is but one, particularly salient, instance of a more general phenomenon, the phenomenon of commons based peer production" (Benkler & Nissenbaum 2006: 396).

[33] Benkler and Nissenbaum (2006: 395) seem very positive with respect to this notion of peers and even attest a "positive character formation" that tends to come with it.

as social networks, as "systems of social interactions" (Meretz 2014a: n.p.; translation J.E.), where the "different qualities are located in the form of the knots and their connections which account for the societal mediation" (ibid.; translation J.E.).[34] Only if those networks are also self-organized the mediation can be said to be commoning-mediation. This can be expected only in form of what Meretz (2014a: n.p.; translation J.E.) called „commonist mediation in society as a whole". Capitalist societies depict different qualities than, say, subsistence-societies, or, commons-societies. Theoretically, commoning must therefore be somewhat different in a capitalist society than in a subsistence-society as the interactions with the social networks will be of different kinds. This can be for example dealing with the separation of spheres or regimes of private property in capitalism.

6.2.6. Needs-satisfaction

According to Helfrich (2012b: 35), the core question, when it comes to commons, is: "What do I / do we need to live?" instead of the question "What can be bought and sold?" of the currently dominant "for-profit paradigm". It has been shown above that it is not only the use aspect that is important in commoning but also the aspect of production, especially in the so-called emerging commons. Benkler and Nissenbaum (2006: 403) argue that "[p]eople contribute for a variety of reasons, ranging from the pure pleasure of creation, to a particular sense of purpose, through to the companionship and social relations that grow around a common enterprise." The producers do not become active because they are forced (i.e. by command structures or indirectly via the compulsions of wage-labor) to do so but voluntarily. Siefkes (2007: 18) argues that peer producers "do what they do because they like doing it, because they love solving interesting problems, being creative and creating something useful." This can be transferred to the non-virtual world when following Meretz (2012a) in his adoption of the concept of needs from Critical Psychology. According to this, human needs have two aspects: first, there are sensual-vital (i.e. secure individual livelihood and biological reproduction) and secondly, there are productive (i.e. taking part in the societal

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[34] "At its core, peer production is a model of social production, emerging alongside contract- and market-based, managerial-firm based and state-based production. These forms of production are typified by two core characteristics. The first is decentralization. Authority to act resides with individual agents faced with opportunities for action, rather than in the hands of a central organizer, like the manager of a firm or a bureaucrat. The second is that they use social cues and motivations, rather than prices or commands, to motivate and coordinate the action of participating agents" (Benkler & Nissenbaum 2006: 400).

process of (re)producing the living conditions) needs (ibid.). By participating in that process, people can expect to be accepted by society and have a feeling of sense. This aspect can be made plausible when looking at the huge amount of unpaid activities that people do (reproduction, nursing, volunteering, education, etc.).

According to Acksel et al. (2015: 134; translation J.E.) commoning can be described as a form of togetherness in which people collaboratively or "commonly organize and take responsibility for the use, preservation and production of polymorphic resources." And Quilligan (2012b: 76) claims that "many alternative communities have developed their own sets of norms and rules to oversee their collective resources sustainably. Whether these commons are traditional (rivers, forests, indigenous cultures) or emerging (solar energy, collaborative consumption, Internet), self-organizing communities take collective action to preserve their local resources, both for themselves and for future generations." Much of what has been described above can be found in these two quotes. First, there is the (re)produsage (use, preservation, production) which, in combination with mediation activities and influenced by the societal environment, is the active and procedural dimension of commoning which can be considered central. Second, there is self-organization which can be said to be the organizational form at hand. Combining these dimensions gives self-organized (re)produsage. Third, the community-level, is addressed by referring to peers as subjects of this social practice. It can be argued that communities only become a full-fledged form of togetherness if each member is considered a peer and that communities need not be "tightly knit" (Benkler 2006: 74) in order to be successful.[35] Fourth, the aims of the peer in the process of self-organized (re)produsage could be "for themselves and for future generations", as Quilligan (2012b: 76) has put it, or simply the satisfaction of their needs (which includes sensual-vital as well as productive needs; see above).[36] This would make the following conceptualization of commoning: self-organized (re)produsage and mediation of peers who aim at satisfying their needs.

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[35] With reference to Wikipedia, Benkler (2006: 74) argued that instead of "a tightly knit community with many social relations to reinforce the sense of common purpose and the social norms embodying it" also "a large and geographically dispersed group of otherwise unrelated participants" can be successful in self-organizing and producing a commons.

[36] Taking action for future generations might be the norm with respect to some commons, but it does not seem to be a necessary ingredient of commoning.

7. Conclusion

This paper aimed at arriving at a conceptualization of commons that would overcome the theoretical problems that can be found in the potpourri of different definitions. First of all, the notion of commons has been introduced as an ongoing and at the same time age-old concept. It has a rich history that lives on in present time. The conceptual work with respect to different conceptualizations started with E. Ostrom's (2010) understanding of commons as commons pool resources which are described as belonging to a category of goods that is distinct from private goods, club goods and public goods. Common pool resources are defined as a) depicting a high subtractability of use and b) being characterized by a high difficulty of excluding potential beneficiaries. The underlying classification of goods, considered as conventional classification, was criticized for making false naturalizations with respect to both categories. It has been argued that the categories are rather socially constructed than characteristics of the goods themselves. Based on this argumentation, a different classification was proposed that bases the distinction of different resources on the way people use them. The suggested categories are rather inclusive or exclusive use on the one and subtractable or additive/neutral use on the other hand.

As the definition of commons as common pool resources has been refused, a concept by Helfrich et al. (2010) and one by Meretz (2012b) have been introduced as alternatives. Both conceptualizations ultimately construct a conceptual triad of community-rules-resources in the first case and resources-commoning-products in the second case. Both concepts have been appreciated for not naturalizing and acknowledging the procedural character of commons, especially by referring to commoning as a social practice. However, both notions have been criticized as being insufficiently clear-cut. Building on this, commons have been defined as social form of tangible or intangible matter determined by commoning. It is believed that with the strong emphasis on commoning and the conceptualization of commons as a social form a false naturalization is avoided and the procedural and social characters of commons are appreciated. The question what commoning is has not been systematically dealt with so also a concept of commoning had to be developed. Commoning has been conceptualized as self-organized (re)produsage and mediation of peers who aim at satisfying their needs. This first attempt to grasp the notion of commoning was obtained from empirical observations as well as theoretical reflection and is heavily inspired by other people's works.

What remains to be done is to further reflect on and test the conceptualizations proposed in this paper. Additionally, it seems that also the terms commoner and commons-organization or commons-project would need an adequate and suitable conceptualization. At the same time, the implications of the formulations on empirical work remain unclear.

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