4. Theory of Practical Ensembles: Structures in Action

4.1 Introduction

The purpose of this chapter is to develop the theoretical framework of practical ensembles based on some of Sartre's central lines of thought regarding human agency, technology, and the dialectical progression of history. The main difficulty with this undertaking lies in grasping both the fundamentals of practical ensembles and their inner workings, while not drifting too far into the details of Sartre's thoughts on society and history.

As mentioned in Chapter 1, Sartre's *Critique* takes a dialectical and praxeological perspective to reveal how human history, driven by free *praxis*, dialectically progresses through material transformations of socioculturally and materially structured constellations of human and non-human elements in a scarce milieu. With this perspective, Sartre can unveil the mechanisms by which these constellations form, the nature of practical interrelations the constellations consist of, and how these interrelations are supported, mediated, and catalyzed by the practico-inert in the form of artificial objects and the human body.

Sartre's method to analyze the inner workings of these constellations is an interlocking set of assumptions and considerations that together comprise a theoretical framework for describing and analyzing practical ensembles. Any constellation in which humans practically interrelate with other humans and/or non-human elements in a scarce milieu can be understood as a practical ensemble. This includes, for instance, traffic, the government, a family, or people at a train station. In understanding any such constellation as a practical ensemble, its larger mode of organization is seen to be the result of human action. By referring to these constellations as ensembles, Sartre emphasizes the fact that the elements comprising them practically interrelate but do not meld into a supposedly higher form of an organic entity. Rather, they remain individual. This view does not just allow him to examine the significance of individual action in the formation of these ensembles. It also enables him to analyze how the ensembles' larger form of organization affects and conditions human action. Practical ensembles are constituted through the employ-

ment of techniques and things. They are held together by the practico-inert. In this regard, they are *made* rather than *grown*, which means that their mode of structuring is not necessary but contingent; it could be otherwise.

According to Sartre, human beings enter "into ensembles of very different kinds, for instance, into what are called *groups* and what I shall call *series*" (Sartre 1978, 65, emphasis in original). This is due to the lived contradiction at the heart of human existence (see section 1.4). Groups and series represent two essentially different modes in which the practical interrelations of human and non-human elements in practical ensembles can be structured. A seemingly contingent gathering of people waiting for a bus, a societal class, or people sharing a road on their way to work, for instance, can be shown to exhibit predominantly serial structures when understood as practical ensembles. These constellations represent passive gatherings of individuals who face the same contingent action conditions that are scaffolded by practico-inert objects or structures. In practical ensembles with a serial structure, the satisfaction of need is concretized in specific fixed means and forms of conduct. Practical freedom of choice and self-realization is limited to a narrowed field of possibilities.

On the other hand, compare a political party or a task force, for instance. These can be shown to exhibit predominantly communal or group structures when understood as practical ensembles. These constellations consist of individuals who actively form and organize themselves to overcome seemingly contingent action conditions by transforming the scaffolding through practico-inert objects or structures. Such constellations are, for instance, political parties, interest groups, or larger social movements like Fridays for Future. Also, smaller constellations of people, who, for instance, organize to grass or plant public spaces in cities represent communal ensembles. However, according to Sartre, groups may become institutions in the course of their undertaking. If this is the case, institutions then develop predominantly serial structures through which the practical freedom of an individual is again limited to certain options for action, while at the same time creating more opportunities for those actions to be realized. It must be noted that in most practical ensembles, serial and communal structures interplay.

Despite the examples Sartre uses to examine the structures of series and groups, and despite the Marxist focus of *Critique*, Sartre's thoughts must be understood to be less specifically about the social interrelations of these ensembles, and more about the way these social interrelations can be dialectically and praxeologically examined to elucidate the historical action conditions of human beings. Sartre's analysis of how groups transform into institutions, for instance, can be applied to mass movements during the French Revolution. These eventually turn into revolutionary tribunals that reign with terror. The same analysis can be applied to the organization and concomitant institutionalization of public traffic regulations governing road traffic. This is because, for Sartre, historical processes in any form represent constant oscillations between practical freedom and material necessity. As such, they

motivate and actively further transitions from series to groups and back. Practical freedom exists in the process of transforming structures of seriality into structures of communality, by negating given limiting conditions in accordance with the mode of how individuals satisfy their needs and desires. This negating, however, entails another transformational process in which groups organize and eventually ossify into the very structures established to transform seriality into communality. Therefore, history, much like human existence, must be understood as a lived contradiction too. Its very processing consists of a never-ending oscillation between liberation and necessitation (Sartre 1978, 72–74).

The potential of Sartre's practical ensemble framework lies in its deconstructive and reconstructive power toward the dynamics of complex constellations. When applied to such constellations, the principles and processes of Sartre's framework allow one to disclose the various modes in which practical interrelations are structured in them. This disclosure may reveal more fundamental interrelations and the modes of their structuring, as well as the ways these structures again mediate, enable, and constrain each other. Based on these interplays, the complexity of the constellations in question can be reconstructed as functionally interdependent networks of structured interrelations between humans and other material entities.

From a philosophical perspective on technology, Sartre's theoretical view on such constellations as practical ensembles offers the possibility to investigate how technology, in the form of artificial objects and bodily techniques, affects human action in various ways. According to Sartre, *la force des choses* arises as a consequence of specific forms of supraindividual organization that determine how individuals enter into certain constellations, reproduce themselves with limited practico-inert means at their disposal within these constellations, adapt to the inner structure of these constellations by cultivating *hexeis*—which represent a form of the practico-inert (see section 4.5)—and potentially initiate transformations that further affect these constellations. Despite the various connotations of the notion of *force* or the phrasing of *power of circumstances*, it must be noted that this force or power does not necessarily imply only negative consequences. Sartre points out numerous ways in which individuals are coerced to modify their actions, owing, for instance, to the position these individuals adopt within practical ensembles, or to the necessity that these individuals feel to reproduce themselves with certain available instrumental means. However, he also acknowledges that the same instrumental means that individuals are somehow coerced to use also enable them to effectively satisfy their needs and desires in some way. Furthermore, Sartre's theory not only allows one to focus on the immediate field of equipmentality but to reveal more profound ways in which technological settings interconnect and mediate each other so as to enable the realization of human action.

For Sartre, individual and supraindividual requirements, wants, and wishes in the dialectic of need and desire provide the starting point and the basis for investi-

gation. Needs and desires render human actions intelligible as situated in relation to a socioculturally and materially structured surrounding as a mediating milieu. To outline a general theory of practical ensembles that can be modified and applied to analyze the possibilities and constraints of human agency as situated in large technological systems, the general relation of scarcity and human agency must be analyzed first.

4.2 Scarcity and Society

In this section, Sartre's view on the human struggle against scarcity is examined. This struggle represents the fundamental condition for the formation, reinforcement, transformation, persistence, crisis, and potential disruption of practical ensembles.

The Struggle against Scarcity

On account of the specific understanding of the relationship between human existence and history that is prominent in Sartre's *Critique*, historically situated individuals must first and foremost be understood as needful beings. Their requirements, wants, and wishes derive from their socioculturally and materially mediated relation to the material complex (or ensemble) they are situated in. According to Sartre, every human being always exists in a state of exigency in relation to a world characterized by scarcity (French *rareté*) (Sartre 1960, 200; Sartre 1978, 123). This exigent state requires material modification to be transformed (see Chapter 2). Despite the fundamental significance Sartre attributes to scarcity, he does not want it to be understood as a statement about human nature or human essence. Rather, it is a conclusion derived from the fact that every human being must necessarily sustain itself by interacting with the material world. Scarcity is both a contingent fact of human life and the sufficient cause of historical development (Monahan 2008, 50–51). Emphasizing its significance for human existence illustrates the fundamental structures of historical development as a "real and constant tension both between man and his environment and between man and man" (Sartre 1978, 127). Based on this tension, Sartre claims the "fundamental structures (techniques and institutions)" can be explained not as immediate results of scarcity but because they were "produced in the *milieu of scarcity*" (Sartre 1978, 127, emphasis in original).

Despite the focus on materiality, scarcity does not solely refer to a lack of material goods, but also to any state in which individuals lack something they require, want, and wish (Monahan 2008, 52). This could be any type of good or service, rights, political representation, etc., as long as the lack represents an incentive for action. The reason for Sartre's focus on material action comes from the material character

of human existence (see section 1.4). The nature of scarcity is not only determined by the requirements, wants, and wishes of individuals and supraindividual groupings (see section 2.3), but also mediated by how technology in the form of practico-inert means concretizes abstract structures of need into concrete structures of desire (see section 3.4). When the abstract need for mobility in the form of the requirement to be able to move, for instance, is partly satisfied by the concrete existence of some modes of transportation, the requirement for other modes of transportation is itself mediated by the relationship between supply and demand prevalent in the mediating milieu. According to Monahan's interpretation, scarcity so fundamentally structures human existence that it represents the background condition of all human action, not only for the present but also for future action. Because totalizing human action is a materially transcending projection toward the future, and because the relation between human beings and the material world is characterized by scarcity, everything that presents itself as a possible option for action is seen as a good that might be scarce in the future—and so it is to be secured and preserved. Monahan phrases it like this: "If I think I have enough water for the present, but I believe I *could* need more tomorrow, or next week, then it turns out that I really do not have *enough* water—I have a scarcity of water despite the fact that I have ample supply for my immediate needs" (Monahan 2008, 58, emphasis in original).

Sartre himself states that "[a]s soon as need appears, surrounding matter is endowed with a passive unity, in that a developing totalisation is reflected in it as a totality: matter revealed as passive totality by an organic being seeking its being in it—this is Nature in its initial form" (Sartre 1978, 81). Ally (2012) points out that Sartre's use of the term *nature* is somewhat ambiguous throughout his philosophical works. In the early Sartre, *Nature*—capitalized to highlight it as an abstract nominative, according to Ally—is used to refer to passive being and exteriority in relation to the interiority of human existence. The later Sartre sees *nature* as an inert and somewhat opaque physicochemical complex surrounding human beings and governed by its own dynamics and laws. This complex can never be fully understood in a dialectical way from the inside but is subject only to analytical science (see section 1.4). The reason is that the whole of nature, as physicochemical reality, becomes a synthetic totality only as a result of the fact that human beings appropriate it by relating to it in a dialectically practical way. Here is seen one instantiation of a three-step dialectical relation. The givenness of physicochemical reality represents a positing that is negated through need and thus disclosed and affirmed as a scarce source of sustenance for human beings (see section 2.3).

However, this human-nature relation should not be seen as a purely rationalized, unidirectional, or exploitative reduction of *nature*, in the sense of Heidegger's notion of *Bestand* (Heidegger 2000). Rather, Sartre's conception of the human-nature relation must be seen as a result of his focus on the dialectical and material fundamentals of human existence. Sartre notes that, as biological organisms, hu-

mans must necessarily practically engage with physicochemical reality and instrumentalize it to provide for themselves. In this context, Ally defends Sartre's conception of instrumentalization, as it seems to be true for all self-sustaining organisms. Ally states that in Sartre's understanding of instrumentalization, "[b]eavers fell trees to make their dams and they swim with the fishes who gather in the place. We mix gravel and sand to make our dams, and we fell trees to make space and lumber and pulp" (Ally 2017, 376).

Systematic Provision of Goods and Services

Sartre has a nuanced understanding of how individuals organize themselves in historical situations and how they preserve these forms of organization with the help of the practico-inert. His understanding goes beyond both general statements about humanity's instrumentalization of physicochemical reality and mere presumptions about a supposed original relationship between humans and nature. Some of Sartre's main interests in *Critique* are the multiplicity of forms of organization in human societies, and the many ways people have instrumentalized their material surroundings in their struggle against scarcity throughout human history. Sartre believes that although scarcity necessitates the instrumentalization of physicochemical reality, and although individual action has a certain rationality, the specific form of an organization through which this instrumentalization is realized and preserved seems to be contingent. Forms of societal organization do not result from an underlying rationality that is present before the dialectical rationality of human action and experience (Sartre 1978, 124). This does not mean, however, that the formation processes themselves are contingent as well. Sartre shows that humanity's relation to *nature*—in all the meanings of the term—takes place in a sociocultural milieu that is enacted through individual and supraindividual action as an ontologically free endeavor on the one hand and necessarily manifested in a practico-inert way on the other. Organizational variation arises when human freedom and creativity clash with material inertia. However, scarcity must always be considered as the medium in which this clash takes place.

The fact that people must satisfy their needs and desires, in confrontation with scarce material conditions, also puts these people in fundamental confrontation with others. Scarcity means that "[t]*here is not enough for everybody*" (Sartre 1978, 128, emphasis in original). In this context, Sartre shows one application of his understanding of practical ensembles. Regarding the way human beings relate to the world, he states that "need is the first totalising relation between the material being, man, and the material ensemble of which he is part" (Sartre 1978, 80). Furthermore, "the world (the ensemble) exists for anyone insofar as the consumption of such and such a product elsewhere, by others, deprives him *here* of the opportunity of getting and consuming something of the same kind" (Sartre 1978, 128, emphasis

in original). Here, Sartre illustrates one of the advantages of conceiving certain constellations between human and non-human entities as practical ensembles. By referring to the world as a material ensemble in the context of individual action and scarcity as well as in relation to others, Sartre illustrates that the world as a totality can be deconstructed into the elements that totalize it. When reconstructed, it can be understood as a wholeness that is continuously totalized by the functional interrelations of self-reproducing individuals in a scarce milieu. In this regard, scarcity is not only conceived as a material relation between individuals and surrounding materiality; it is also disclosed as a social relation to others.

The social relation of scarcity is not necessarily characterized by hostility. People are usually situated in larger, potentially overlapping, social constellations, such as families, groupings, gatherings, political parties, corporations, institutions, societal classes, and ultimately society as a whole. Conceiving these constellations as practical ensembles deconstructs their alleged status as totalities, and reveals the dialectical and praxeological conditions of their totalizing formation, the functional interrelationship of their elements, the specific way this interrelationship is structured, and the functional requirement this structured interrelation fulfills. Sartre refers to these social constellations as social ensembles. Through the conceptual lens of practical ensembles, the reasons for these constellations to form appear to be manifold, but the reasons are all grounded in people's needs and desires and in their inability to satisfy them on their own in relation to their common sociocultural and material conditions.

Sartre states that people (re-)produce themselves amid others who do the same. As a consequence, they form larger constellations to systematically provide for their needs and desires. These constellations "constitute and institutionalise themselves not because scarcity appears to everyone in need through the need of Others, but because it is negated, in the unified field, by *praxis, by labour*" (Sartre 1978, 136, emphasis in original). Individual action represents the active attempt to negate scarcity by affirming the individual as an end in itself. However, this action is not individual action pure and simple. It is conditioned, in its entire course, by the structure of the practical ensembles in which the action is situated. At the same time, this structure is itself defined, manifested, and reinforced by the functional requirements of its elements to satisfy their exigencies. This satisfaction takes place through actions undertaken to transform these exigencies and by the practico-inert means that come to use in this transformation.

A family with children, for instance, can, very generally, be understood as a practical (social) ensemble structured to fulfill the functional requirement of raising children and supporting each other. The structured interrelations of this ensemble consist of an unequal spread of giving and demanding from its members in relation to a sociocultural and material surrounding milieu. In terms of the material requirements of the members of the family, parents contribute more, while children con-

tribute less. In terms of the wants and wishes of its members, all members—parents and children—invest love, emotional support, and energy. The inner structure and logic of such ensembles are conditioned by the concrete social interrelations of all members, their individual needs and desires, and their capacities.

This family, as a social ensemble, might live in a city, for instance. This city can itself be understood as a practical ensemble. It consists of human and non-human elements such as citizens, commuters, city government, buses, cars, roads, housing, shopping malls, and so on. The actions of the human elements to satisfy their requirements and wants are interrelated with other human and non-human elements. This inner structure is again conditioned by sociocultural factors.

Both ensembles are in the constant process of totalization, as driven by the actions of their human elements and their interrelations with the practico-inert. In this way, the exigencies of individuals, their concomitant options for action, and their practical constraints present themselves differently. If the family ensemble is situated in the city ensemble—an ensemble of ensembles—the actions of this specific family as a whole and its members individually can be understood in relation to what possibilities and constraints their situation in the city provide them with.

Since practico-inert objects and structures mediate the functional interrelations of their elements in relation to prevailing material conditions, these objects not only represent exteriorized action potentials (see section 3.4) but also material manners through which potentially scarce goods and services are secured and provisioned in individual and supraindividual ways. However, these practico-inert objects are not just advantageous. They also have certain demands and requirements themselves, which can eventually invert the relationship between the user and the used (see 4.3).

The understanding of functionally interrelated constellations of human and non-human elements, through the conceptual lens of practical ensembles, has similarities to an understanding of such constellations as sociotechnical systems. Both models reveal that the larger mode of interrelations between their elements is structured according to the functional requirements of their human elements on the one hand, and according to their mediation through non-human elements on the other.[1]

Practical ensembles may indeed be understood as sociotechnical systems with a fixed system status, an organizational structure, and forms of behavior that illustrate their inner workings and portray their overall function. In this regard, the structures of practical ensembles are seen to provide for the ends of their human elements—such as the satisfaction of requirements, wants, and wishes—while also preserving the mode in which this provision takes place as a strategic implementation of technological means.

1 A short overview of the concept of *sociotechnical system* can be found in Karafyllis (2019). For a more thorough analysis of the concept, see Ropohl (2009).

Although a system understanding of practical ensembles like this one thus seems to fit, it neglects the inherent dialectical historicity of practical ensembles. The theory of sociotechnical systems presupposes that the rationality of the system corresponds to the rational structure of human action, especially in terms of instrumental action. In most theoretical conceptions of sociotechnical systems, system constraints result from conflicts of interest that can be transformed through communication, technological development, and general optimization of the ensemble as a sociotechnical system (Hubig 2007, 31).

Therefore, while it may account for functional interrelations of human and nonhuman elements or even for the way their larger form of organization conditions and constrains their respective operations, a system understanding remains ahistorical with respect to Sartre's theory of history. According to Sartre's regressive-progressive method (see section 1.3), how historical situations both constitute and are constituted by individuals can only be fully understood through the dialectical conditions of their becoming through action. In this regard, Sartre's theory of practical ensembles represents a deconstructive and reconstructive understanding of the becoming of any form of societal constellation. According to him, this understanding ultimately accounts for the significance of human action in the progression of history, for the role of action in the formation of societal constellations, and for the conditions in which this action eventually acts back on itself (see sections 1.4 and 3.4). Furthermore, this strong focus on the role of action in the becoming of larger constellations illustrates the inherent historicity of the dialectical interrelation between action, scarcity, and the practico-inert.

Against this historical background, the entire collection of practico-inert objects that can be found in a societal constellation at any given time represents the material culture of this society at a certain stage. More precisely, practico-inert objects represent the material side of strategies employed by individuals and larger constellations to tackle needs and desires. They face these as a result of their specific socioculturally structured relation to a scarce material environment. Ancient roads and artifacts, stone tools and weapons, burial grounds, and grave goods, physical remains of past civilizations—any form of material settings—represent ways that past and present societies organize the provision of goods and the concomitant satisfaction of individual and collective needs.

In this respect, Sartre's understanding of practical ensembles shows thematic similarities to Heidegger's *Ge-Stell*. This is evident in the way in which, at different stages of technological development, practico-inert objects condition how individuals in practical ensembles disclose some goods to be scarce whereas the provision of other goods can be effectively preserved with technological means. This point is further developed in section 4.3.

Structural Features of Practical Ensembles

According to the deconstructive and reconstructive agenda of Sartre's theory of practical ensembles, the structural features of historical constellations are understood to result from how individuals practically respond to and satisfy their needs and desires in combination with practico-inert instrumental means. Such interrelations are future-oriented and thus path dependent. Eventually, these interrelations lead to multiple complex forms of organization. The exact constitution of these forms of organization is contingent.

This work has discussed how Sartre conceives human action to be a practical engagement with *socioculturally structured* materiality. Concerning the features of practical ensembles, it becomes more clear, what it means for materiality to be *socioculturally structured* in a certain way. The later Sartre somewhat develops his conception of *structure* in response to Lévi-Strauss' *The Elementary Structures of Kinship*. *Structures* represent the material, social, cultural, and ideological foundations that give rise to and shape the free actions of individuals. After discussing the genesis of groups, Sartre recognizes Lévi-Strauss' contribution to the analysis of structures and states: "Function as lived *praxis* appears in the study of the group as objectivity in the *objectified* form of structure. And we shall not understand anything of the intelligibility of organised *praxis* as long as we do not raise the question of the intelligibility of structures" (Sartre 1978, 480, emphasis in original). Sartre agrees with Lévi-Strauss in that individuals shape their sociocultural and material milieu through action inasmuch as they are shaped by it. The *structures* of this milieu, i.e. the situational factors that scaffold, shape, and give rise to individuals' practical fields (see section 2.4), represent these individuals' *necessity of freedom* to totalize themselves (Sartre 1978, 489). In contrast to Lévi-Strauss, however, Sartre stresses the fact that "what we are dealing with here is not a totality but a totalization […] a multiplicity which totalises itself in order to totalise the practical field from a certain perspective" (Sartre 1978, 492). Sartre's most basic conclusion is that the existence of structures is not a presupposition of action. Rather, structures emerge through the totalizing activity of historically situated agents and further affect how these agents form practical relations.

In historical situations, individuals dialectically depend on and totalize their available practico-inert practical field of equipmentality through their actions. These totalizing actions are goal-oriented on the basis that these individuals are ends in themselves. Needs and desires, as well as the respective ends of action, arise in the interplay of individual requirements, wants, and wishes and what the practical field of equipmentality provides as instrumental means. Sometimes these individuals repeat the way they practically respond to and satisfy their inherent needfulness because they repeatedly re-interiorize their specific practical field of equipmentality and possibility. When this enables a practical response to be somewhat successful, it can be said that the individuals' actions are *structured* according

to their practical interrelation with their surrounding materiality. This means that the abstract course of the totalizing actions of these individuals is scaffolded and shaped by the fact that these individuals, as ends in themselves, must rely on the practical field of equipmentality and possibility materially available to them—in the relatively limited ways it is available to them—if they want to practically respond to and satisfy their needs and desires. These individuals always enact the already socially meaningful equipmentality of things and the effects of techniques in a social milieu. Given that this social milieu consists of the practical interrelations of other individuals and their surrounding materiality, the actions of individuals thus take place in relation to their socioculturally *structured* materiality. *Structure*, in this regard, represents an abstract, practically instantiated and thus concretized set of rules, regulations, and expectations of practical fields of equipmentality and possibility that normalize, mediate and thus shape how individuals realize their intended ends (Hubig 2015, 74).[2]

According to Sartre, two ideal modes can be identified in which the practical responses of individuals are structured: *seriality* and *communality*. Sartre also refers to these modes of structuring as two *types of human mediation* (Sartre 1978, 170–171). A practical ensemble can form based on how human beings respond to their needs and desires individually in interrelation with a prefabricated field of equipmentality. Such ensembles exhibit predominantly serial structures. A communally structured ensemble forms when human beings unite to actively overcome how such a prefabricated field of equipmentality is given to them.

Consequently, to examine the general conditions, possibilities, and practical constraints of individual action, the structural features of constellations in which this action is situated must be scrutinized through the conceptual lens of practical ensembles. In the next section, this is done by examining some ways in which historical constellations form and reinforce through technologically mediated action.

2 In this regard, Sartre's thoughts on action and structure resemble Giddens' thoughts on the *duality of structure* in *The Constitution of Society*. Giddens states: "Structure, as recursively organized sets of rules and resources, is out of time and space, save in its instantiations and co-ordination as memory traces, and is marked by an 'absence of the subject'. The social systems in which structure is recursively implicated, on the contrary, comprise the situated activities of human agents, reproduced across time and space. Analysing the structuration of social systems means studying the modes in which such systems, grounded in the knowledgeable activities of situated actors who draw upon rules and resources in the diversity of action contexts, are produced and reproduced in interaction" (Giddens 1986, 25).

4.3 Formation, Reinforcement, and Stabilization

In this section, some ways in which practical ensembles form and some ways in which their inner structures are reinforced will be exemplified through constellations that predominantly exhibit serial structures. Following this, the transformation of practical ensembles is exemplified through the transition from ensembles with predominantly serial structures to ensembles with predominantly communal structures and back.

The Formation of Serial Structures

When a practical ensemble is united by isolated practical relations of human elements to non-human, practico-inert objects and structures in dependence on prevalent material conditions, and when this practical ensemble furthermore remains defined by this conjunction, it is called a *collective* (Sartre 1978, 255). In collectives, each member's belonging to the ensemble is not a result of a conscious choice but comes from their isolated practical relation based on their functional requirements/exigencies. As a consequence of this mode of structuring, the human elements in these ensembles remain in a pure exterior relation to each other without interior cohesion (Blättler 2012, 71). Hence, not individuality but interchangeability and even competition lie at the heart of these practical ensembles (Rae 2011, 191). For this reason, Sartre refers to this mode of structuring as seriality. Because structures of seriality result from an individual's practical relations to given practico-inert objects and structures, the unity of collectives is scaffolded and prefabricated. For this reason, Sartre refrains from referring to practical ensembles with serial structures as *organizations* or as being *organized*. In his understanding, *organization* implies that a practical ensemble has interior cohesion as a result of an active synthesis through its human elements (see section 4.4). By contrast, practical ensembles with a serial structure result from passive synthesis. Nevertheless, because the practical ensemble is united, it constitutes what Sartre calls a *partial totality*, which defines itself from the inside through the specific mode that distinguishes it from its outside. In this regard, any serially structured ensemble may represent a moment in the larger totalization of another ensemble (Sartre 1978, 88).[3]

Sartre uses people waiting for the bus to exemplify serial structuring. Initially, these people do not appear to be a structured totality. They look like a general gathering consisting of a random number of individuals. However, when this gathering is conceived in a dialectical and praxeological way, their "generality […] is just an abstract appearance, for it is actually constituted in its very multiplicity by its transcendent unity as a structured multiplicity" (Sartre 1978, 262). Although the gathering ap-

3 This is more thoroughly discussed in sections 4.4 and 4.6.

pears like a random number of people, the people are structured. What unites these people is that they all gather at the bus stop in pursuit of getting a seat on the bus. Through Sartre's conceptual lens, this multiplicity can be reconstructed according to the goal-oriented actions of its human elements. This means that the general gathering of the multiplicity of individuals at the bus stop is indeed a structured gathering that is united by the common individual goals of these people. In this regard, the multiplicity of people presents itself as a practical ensemble with serially structured functional interrelations between its human and non-human elements. The individuals at the bus stop indeed represent a fixed constellation, because the human elements of the ensemble are unified as isolated individuals whose *praxis* (waiting) is equally conditioned by the same non-human, practico-inert element (bus). The non-human element thus fulfills two functions. First, it functions as a common and available means (of transportation) by which the human elements must satisfy their needs and desires (for mobility in general or for reaching their workplace in particular, etc.). Second, the means also functions as a concrete way in which the provision of a required good or service is reliably preserved for future use. In that these individuals have to rely on the repeated use of the same means of subsistence—understood abstractly—they are subject to a passive synthesis. Although such a passive synthesis is still enacted by individual *praxis*, the unity it represents must be dialectically understood as the affirmation of a pre-established positing through sociocultural and material conditions, instead of being an active engagement with these conditions in the sense of dialectical negation. Passive synthesis is characterized by the fact that it takes place in a historical context in which individuals necessarily have to sustain themselves with prefabricated, fixed, and limited means and that these individuals acquiesce to this fact. This means not only that individuals in serial structures are not organized; they are also separated and atomized, and thus represent competitors for the means at their disposal—in this case, a seat in the bus (Sartre 1978, 130, 259). The competition between these individuals represents a contradiction that is sublated insofar as the bus provides everyone with a seat.

The serial gathering of people at the bus station is thus revealed to be structured by how exigencies gather individuals around a practico-inert object because all individuals relate to this object in the same way while not questioning this relating. The structure of the gathering fulfills the functional requirements of its elements in a specific way. According to Kleinherenbrink and Gusman (2018), the bus represents a social object, as it mediates the concrete relations of individuals.

The serial gathering of people at the bus station exemplifies what Sartre refers to as a *direct* gathering, in which people are immediately present on-site. He distinguishes different kinds of *presence* in predominantly serially structured ensembles and links them to the possible kinds of interrelations between individuals. He defines gatherings by the co-presence of their members in the sense that the possibility of reciprocity and thus transformation is immediately given. In *direct* gatherings,

like at a bus stop or in front of a bakery, these people have the possibility to unite and diffuse their serial structuring because they are directly present to each other on-site (see section 4.4).

In contrast to such direct gatherings, technological artifacts and structures can also condition the actions of individuals in such a way as to induce the constitution of *indirect gatherings*. These are characterized by *absence*. In such gatherings, people gather around a practico-inert object or structure serially while also being separated from each other through their specific way of practical interrelating. Sartre's example is a radio broadcast in which each listener remains passive and singular with regard to the broadcaster on the radio. Although the whole of listeners is a structured ensemble that forms by people gathering around the radio in the act of listening, their listening itself is what separates these listeners from one another (Sartre 1978, 270–271). More modern examples of such indirect gatherings are social networks. Platforms like Facebook or Twitter claim to engender social exchange between individuals. By design, however, such platforms must rather be seen to mediate such an exchange. Platform users who *like* another user's post or tweet interact with the platform which then interacts with the other user. The instantaneous nature of this mediation obscures the fact that users on social networks are situated in a serially structured practical ensemble.

In both examples, one effect of technology via artificial objects or structures in the formation of practical ensembles is revealed in how practico-inert instrumental means passively gathering human beings around them. They do so by enabling these individuals to repeatedly satisfy certain needs and desires within larger functionally interrelated constellations.

Interest and the Demands of Things

This effect of technology can be further scrutinized regarding the material properties of the practico-inert object. Insofar as the people in the serial gathering at the bus stop depend on the bus to satisfy their need for mobility, the bus represents what Sartre calls their *interest* to which he also refers their *being-wholly-outside-oneself-in-a-thing* (Sartre 1978, 259). According to Sartre, interest is a "relation between man and thing in a social field […] it exists in a more or less developed form wherever men live in the midst of a material set of tools which impose their techniques on them" (Sartre 1978, 197). In that these people require the service provided by the bus, they have to abide by the rules of the practico-inert object they use as means. Owing to this predicament, the relation between agent and means is inverted. It is no longer according to the needs and desires of individuals that actions are performed, but according to the demands of the instrumental means that are supposed to support these actions. In this way, the demands and requirements as well as the structural integrity of practico-inert objects become associated and even equated with

the concrete possibility of these individuals to sustain themselves as organic entities through these objects as means. The effect is that certain instrumental means become critical for the individuals who must rely on them when these means are associated as *interests*.[4] This inverts the relation of equipmentality between the user and means. Sartre mentions that for a house, for instance, to "preserve its reality as a *dwelling* a house must be *inhabited*, that is to say, looked after, heated, swept, repainted, etc.; otherwise it deteriorates. This vampire object constantly absorbs human action, lives on blood taken from man and finally lives in symbiosis with him" (Sartre 1978, 169, emphasis in original).

Sartre points out that this reversed designation, from means to user, can be more abstract or concrete depending on the exact nature of the position individuals adopt in specific practical ensembles with a serial structure. Reflecting on his position in French society in the 1950s and 1960s, Sartre states the following:

> a brace and bit and a monkey-wrench designate me as much as my neighbour. But when these designations are addressed to me, they generally remain abstract and purely logical, because I am a petty-bourgeois intellectual, or rather, because I am designated as a petty bourgeois intellectual by the very fact that these relations remain pure, dead possibilities. However, in the practical field of actual common labour, the skilled worker is really and directly designated by the tool or the machine to which he is assigned. (Sartre 1978, 186)

The structural integrity of practico-inert objects along with their strong association as means of subsistence not only renders them critical for an individual's mode of reproduction—it also results in certain forms of coercion and necessitation. This can be extrapolated to the practico-inert setting at the bus stop.

The bus, as a practico-inert object, is built to have certain material properties, such as a limited seating capacity, among others. These properties represent materialized ways in which past designers and creators responded to the needs and desires of their historical situation. These needs and desires work their way into the future in the form of the bus as practico-inert object (see section 3.4). The properties of the bus refer to specific forms of conduct through which needs and desires can be satisfied using the bus. In this example, the bus is useful for satisfying a set number of people's needs or desires for mobility. Through the conceptual lens of practical ensembles, the operations revolving around the constellation of bus, bus driver, and passengers can be further scrutinized regarding certain factors that enable them. This scrutiny reveals that the bus itself requires another larger infrastructure, such as a road and a system of traffic regulations, to fulfill its purpose. The road infrastructure must be maintained by people, who require this form of labor to earn money

4 In section 4.6, it is argued that the association of instrumental means as *interest* generates vulnerabilities in the case of crises and disruptions.

to satisfy their needs and desires. Thus, right away, layered forms of structured interrelations are revealed, and they all interplay to enable the passive gathering at the bus stop.

Not only the seating capacity but also the condition of the road infrastructure, the distribution of stops, and other factors delimit both the number of people who can take the bus and the route this bus can potentially take. This implies that practico-inert objects and structures themselves not only passively gather a series of needy/desiring people around them, whose social interrelations are arranged by these very objects and structures. The way these objects and structures mediate the social relations between individual human beings is also based on the ends that were manifested in the material properties of these objects and structures. Furthermore, besides the needs and desires of its human elements, the demands and requirements of practico-inert objects and structures, as well as the way these demands and requirements must be taken care of, affect how practical ensembles are structured. Given those human and non-human elements contribute to the overall *praxis* of the ensemble, either by adopting a functional role themselves or by attributing a functional role to other elements, Sartre considers practical ensembles to be functionally interrelated and mutually mediated. He states:

> [P]*raxis* as the unification of inorganic plurality becomes the *practical* unity of matter. Material forces gathered together in the passive unity of tools and machines *perform actions* [French *font des actes*]: they *unify* other inorganic dispersals and thereby impose a material unification on the plurality of men. The movement of materiality, in fact, derives from men. But the *praxis* inscribed in the instrument by past labour defines behaviour *a priori* [French *définit apriori les conduites*] by sketching in its passive rigidity the outline of a sort of mechanical alterity which culminates in a division of labour. Precisely because matter mediates between men, men mediate between materialised *praxes*, and dispersal orders itself into a sort of quasi-synthetic hierarchy reproducing the particular ordering imposed on materiality by past labour in the form of a human order. (Sartre 1978, 184, emphasis in original; Sartre 1960, 250–251)

How serial structures in practical ensembles are particularly ordered reflects the mode in which the functional requirements or exigencies of their elements—in the form of human needs and desires, as well as practico-inert demands and requirements—are taken care of. Through the material properties established by others in the practico-inert objects and systems that people rely on in serial gatherings, materialized meaning intrudes on individual forms of conduct. As a result, the actions of the human elements are transformed by the fact that an object or structure is used as a means that has been constructed for a specific purpose. Although the means itself does not strictly alter an action, the use of practico-inert objects still coerces the human elements to deviate from their initially intended course of action (Sartre 1978,

223). Though individuals may realize their ends, this realization must be understood as a transformation of subjective ends into objective ends through the means (Hubig 2006, 129).

For Sartre's earlier theoretical conception of ontological freedom and human existence (see section 2.3), this form of coercion initially poses no problem. If an ontologically free and informed agent is assumed, whose choice of means is rational, transparent, and directed toward the attainment of clearly defined individual ends, this type of coercion through instrumental means is only hypothetical. Agents remain ontologically free in the ends they choose by pursuing them, and in the means they seek to employ toward these ends. Only when they wish to attain certain ends must they adjust their actions and abide by the pre-established ways of performing actions that others have manifested in the means at hand (Sartre 2021, 557). However, in any given historical situation the attainment of ends is not a free choice but a practical necessity. Consequently, these individuals face categorical coercions to modify their actions.

Exigency, Necessitation of Action, and Structural Reinforcement

This becomes clearer through Sartre's conception of how historical situations necessitate individuals to rely on a limited instrumental field of possibilities. Sartre illustrates this with class-being, in particular that of the working class. As is the case with his entire later philosophy, Sartre's view on societal classes is shaped by a Marxist understanding of the social developments of the 1950s and 1960s. He claims that the working class, when conceived as a practical ensemble, is revealed to be constituted by the social stratification of capitalist societies, as it manifests in the shared exigencies of individuals and the way these individuals must sustain themselves under common sociocultural and material conditions.

Despite Sartre's Marxist understanding, his assumptions prove to be adequate beyond a Marxist class analysis. He summarizes his understanding of class-being in a rather conclusive passage, stating that at the origin of class-membership, there are

> passive syntheses of materiality […] these syntheses represent both the general conditions of social activity and our most immediate, crudest objective reality […] they are simply the *crystallized practice* of previous generations [French *pratique cristallisée des générations précédentes*]: individuals find an existence already sketched out [French *préesquissée*] for them at birth […] What is 'assigned' to them is a type of work, and a material condition and a standard of living tied to this activity; it is a fundamental *attitude* [French *attitude fondamentale*], as well as a determinative provision of material and intellectual tools; it is a strictly limited

> field of possibilities [*un champ de possibilités rigoureusement limité*]. (Sartre 1978, 232, emphasis in original; Sartre 1960, 289)

According to this understanding, a societal class can be conceived as a practical ensemble with certain structures of seriality. The same applies to basically any constellation in which individuals share similar life conditions. The human elements in these ensembles are usually united not by a common, interior cause and undertaking, but by their prefabricated means of subsistence on the one hand, and by the *attitude* they adopt as a result of their shared material conditions on the other. This section focuses on the interplay between practico-inert means and individual action treated, especially regarding the inner structure of practical ensembles. How attitude is formed and how it affects the inner structure of practical ensembles will be analyzed in section 4.5.

According to Sartre, through membership in serial constellations, individual freedom is mostly limited to the means provided by the general conditions and possibilities predominant in those constellations. The layers of the practico-inert that K. S. Engels (2018) identifies (see section 3.4) can all be found in class-being. A certain group of physical artifacts represents the means of subsistence for every class. Language as a body technique is enacted through various dialects and sociolects that mark class-membership. This membership also comes with deeply ingrained ideas or attitudes about the self and others in society. Here other body techniques can also be found, such as specific modes of recreation or consumption. These attitudes again represent social objects, or, more precisely, social modes of interaction manifested in individuals.

Human beings are necessarily situated in socioculturally and materially structured constellations that scaffold a field of possibilities for them; these individuals must also practically satisfy their needs and desires with certain limited practico-inert means available to them. From these facts, it follows that these individuals do not face a hypothetical but rather what Sartre refers to as *categorical* coercion to modify their course of action to reproduce themselves. This coercion is categorical because it corresponds to the necessity of self-reproduction (Sartre 1978, 190). Given that instrumental means represent practico-inert objects and structures, the meaning and purpose of which have been established by others in the form of material properties (see section 3.4), individuals who must rely on these means must necessarily acquiesce to the fact that extrasubjective meaning intrudes into their practical interrelation with their surroundings. Despite their ontological freedom, historically situated individuals do not remain practically free to choose the ways they realize themselves through their actions. Their course of action must necessarily be performed with the means prescribed by the position that these individuals adopt within their respective practical ensembles (Sartre 1978, 190). In this context, Sartre states:

> Exigency, in fact, whether in the form of an order or a categorical imperative, constitutes itself in everyone as other than him. (He cannot modify it, but simply has to conform to it; it is beyond his control, and he may change entirely without changing it; in short, it does not enter into the dialectical movement of behaviour.) In this way, exigency constitutes him as other than himself, In so far as he is characterised by *praxis*, his *praxis* does not originate in need or in desire [French *celle-ci ne prend pas sa source dans le besoin ou dans le désir*]; it is not the process of realizing his project, but in so far as it is constituted so as to achieve an alien object, it is, in the agent himself, the *praxis* of another; and it is another who objectifies himself in the result. (Sartre 1978, 187–188, emphasis in original; Sartre 1960, 253)

Through exigencies, or the material claims prevalent in practical ensembles, individuals exhibit certain forms of behavior. These forms no longer originate in their free and self-totalizing interrelation with their sociocultural and material mediating milieu, based on their needs and desires. Rather, these forms of behavior come from the material necessity of another sector of materiality. In that the historical situation of individuals, i.e. their position within practical ensembles, necessitates their reliance on certain means of subsistence, their totalizing action no longer derives directly from their exigencies. It comes instead from how the means at their disposal are structured, and from how the utility of these means creates a new practical setting that not only yields intended effects but also side effects (Sartre 1978, 183–186). This interplay—between the necessity for human beings to sustain themselves within a strictly limited practical field of equipmentality, and the possibility ascribed to them in virtue of their position in forms of societal organization—is the root of *la force des choses*.

In the case of the working class, understood as a practical ensemble, their means of subsistence are structured so as to produce laborers, products, and profit in a capitalist mode of production. This mode of production can itself be understood as a practical ensemble consisting of human and non-human elements, or even as an ensemble of ensembles.[5] These individuals persistently rely on a prefabricated

5 In this regard Sartre's theories are somewhat limited. Although he acknowledges that groups form sub-groups with differentiated functions (Sartre 1978, 417), he does not provide the terminology to clearly differentiate between micro-, meso-, and macro-ensembles. The point of Sartre's practical ensembles is not primarily to illustrate the complexity of systems, but to examine the possibilities and practical constraints individuals face in practical constellations. For this reason, every larger functionally interrelated constellation of human and non-human elements represents a practical ensemble; the analysis of its structures reveals the historical situation of individuals. In section 4.6, it is shown that Sartre's conception of counter-finalities allows one to conceive of structures of coupled ensembles.

instrumental field of possibilities through which their needs and desires are effectively taken care of, and the inner structure of practical ensembles is consolidated, reinforced, and perpetuated based on the pre-established forms of conduct associated with and affected by technology in the form of artificial objects and body techniques. In Sartrean terms, individuals totalize the inner structure of their practical ensembles and thus reinforce these ensembles as totalities. They do so based on the practical interrelations between the elements of these ensembles. Sartre's example involves the processes in a factory:

> [I]ndividuals in an organisation interiorise the exigency of matter and re-exteriorise it as the exigency of man. Through supervisors and inspectors, machines demand a particular rhythm of the worker: and it makes no difference whether the producers are supervised by particular *men* or whether, when the equipment allows it, the supervisors are replaced by a more or less automatic system of checks. In either case, material exigency, whether it is expressed through a machine-man or a human machine, comes to the machine through man to precisely the extent that it comes to man through the machines. Whether *in the machine*, as imperative expectation and as power, or *in man*, as mimicry (imitating the inert in giving orders), as action and coercive power, exigency is *always* both man as a practical agent and matter as worked product in an indivisible symbiosis. (Sartre 1978, 190–191, emphasis in original)

As a result, the totalizing activity of individuals or groups "ceases to be the free organisation of the practical field and becomes the re-organisation of one sector of materiality in accordance with the exigencies of another sector of materiality" (Sartre 1978, 191). This furthers the divide between the concrete form of subjectivity and objectivity realized through historically situated totalizing actions, as mentioned in section 2.4. Furthermore, through this form of reinforcement, practical ensembles actively resist change, and individuals associate the structure of these ensembles with their interests. In this regard, practical ensembles generate a certain functional criticality for the individuals situated in them.

Objectification and Alienation

Although what was described above is reminiscent of a Marxist understanding of alienation, Sartre hesitates to recognize it as such. He states that in a classical Marxist understanding, alienation comes with exploitation in capitalist societies. However, the specific practical constraints he reveals to affect individuals in practical ensembles go beyond capitalist exploitation. In all practical ensembles, practical constraints arise as a result of the lived contradiction that is human existence. As such, these constraints represent constitutive aspects of human existence, irrespective of the overall societal mode of production. Sartre also struggles to recognize

this circumstance as alienation in a Hegelian sense, according to which all forms of human objectification, through labor or otherwise, essentially represent forms of alienation. Rather, Sartre reevaluates the relationship between objectification and alienation in human existence.

According to Sartre, objectification must not be understood merely as an outcome of human action clashing with the plasticity of physicochemical reality. It is instead the root of the lived contradiction of human existence (see section 1.4) and its consequence (Sartre 1978, 112). As such, it represents the condition of possibility for self-recognition.

Through their actions, human beings exteriorize and objectify themselves in the world. Although this is mostly evident in the larger effects of human actions—the things they built and the structures they form—it is also present in the smaller, more intricate traces humans leave through their actions, such as footsteps, grind marks, and wear and tear. In that human beings re-interiorize their effects and traces as objectified in matter, they discover themselves as "*Other* in the world of objectivity" (Sartre 1978, 227, emphasis in original). According to Sartre, human beings may only recognize themselves through detours. This means that they assess how they affect the world through the effects they cause through their actions. Their interiority becomes tangible to them in an oscillating process by which it is translated into exteriority and hence must be re-interiorized as Other. This can be through the *look*, i.e. the reactions and judgments of others (Sartre 2021, 401–408), or through the spotting of differences between intended and realized ends (Sartre 2021, 249–250), among other ways. Sartre summarizes this paradoxical fact in a rather poetic way: "All of us spend our lives engraving our maleficent image on things, and it fascinates and bewilders us if we try to understand ourselves *through it*, although we are ourselves the totalising movement which results in *this* particular objectification" (Sartre 1978, 227, emphasis in original).

Alienation, however, is a result of specific forms of societal interrelations in which individuals are forced to transform their exigencies according to the exigencies of another material sector without necessarily realizing this to be the case (Sartre 1978, 164).[6] Consequently, Sartre's notion of alienation is not limited to capitalist modes of production but can be applied to all forms of constellations that exhibit the characteristics mentioned above.

Historical Constellations as Ge-Stell

Sartre's description of the situation of individuals in practical ensembles with predominantly serial structures resembles Heidegger's understanding of *Ge-Stell*. This

6 For a more thorough discussion of Sartre's conception of alienation, see Birt (1986) and Collamati (2016).

is evident not only in Sartre's conception of scarcity and people's demands for securing potential goods, services, and other options for action; it also appears in how individuals are challenged, for instance, to respond to the demands of the instrumental means they use. In *Die Frage nach der Technik*, Heidegger analyzes the nature of technology by contrasting the way human-world relations are mediated by ancient and more modern technologies. He states that the actual essence of technology is nothing technological at all (Heidegger 2000, 7–8). Rather, technology must be understood as the very mode of disclosing and securing options for action regarding the world (Luckner 2012, 61). Technology must thus be comprehended as a mode of being that Heidegger calls *Ge-Stell*. In this mode of being, entities can appear as *Bestand*, i.e. as mere standing reserves and means to ends. The problematic aspect of this process is the threatening commitment to particular options for action and the obscuring of other modes of being (Luckner 2012, 63).

Against the background of Sartre's philosophy, it could be said that when constellations of human and non-human elements are understood through the lens of practical ensembles, they can be revealed to represent instantiations of *Ge-Stell*. Any such constellations represent material and sociocultural settings that dispose the actions of individuals by providing them with fixed options (or opportunities) for action. While this form of commitment allows for increased efficiency and effectiveness in the satisfaction and generation of needs, desires, and demands, it also obscures other options for action. Furthermore, the fixation on specific forms of conduct challenges individuals and physicochemical reality alike, as both become *standing reserve* (German *Bestand*). In the case of individuals, this is evident in apersonal structures of seriality, where each individual ultimately represents a competitor for the means of subsistence (see above). However, according to Sartre, these individuals can organize themselves and attempt to rise above the structures of their ensembles (see 4.4). How physicochemical reality becomes *standing reserve* is similar to the way instrumental means become *interest*. Because individuals satisfy their needs and desires by instrumentalizing physicochemical reality (see section 4.2), specific goods and resources become critical as they are associated with the continuation of certain constellations. This may lead to excessive demands and an overload of ecosystems and other constellations alike. Eventually, this overload can trigger *counter-finalities*, through which the very structures of practical ensembles are threatened at their core (see section 4.6).

4.4 Transformation

This section aims to identify processes through which the structures of practical ensembles are transformed. This transformation occurs because agents identify a lack of services or options for action in the current structure of their practical ensemble.

An illustration is the transformations from serially structured ensembles to communally structured ensembles and back.

However, before that, it must be noted that the analysis in this work of how Sartre conceives groups to form based on series in no way claims to be complete. On the contrary, some essential aspects of Sartre's analysis must be omitted to keep the underlying dynamics of practical ensembles in view. Regarding these underlying dynamics, Sartre's line of thinking is not so much about the sociality of these groups in particular; rather, it represents a dialectical and praxeological examination of the conditions individuals generally face when organizing in historical situations. Although Sartre uses terms like *group-in-fusion*, *organized group*, and *institution*, these terms refer to more abstract forms of supraindividual responses that condition individual actions.[7]

The Transformation from Serial to Communal Ensembles

At times a practical ensemble may form in the active attempt of its human elements to eliminate or change how the conjunction of practico-inert objects and sociocultural/material conditions scaffolds their serial unity. When this happens, and when this new practical ensemble furthermore remains defined by its undertaking, this ensemble represents a preliminary group called a *group-in-fusion*. It exhibits a communal structure (Sartre 1978, 255). The initial attempt is to change either the functional requirement the practical ensemble fulfills or how the practical ensemble fulfills that requirement. It follows that any group-in-fusion presupposes structures of seriality against which the group-in-fusion defines itself (Rae 2011, 192). Although the communal structure of practical ensembles differs from that of serial structures, they still reflect both the functional requirements of their elements and the fact that communal structures define themselves against their outside (see section 4.3).

Owing to the limited field of possibilities prevalent in serially structured ensembles, individuals situated in these ensembles can be threatened by the fact that some of their needs and desires are not provided for—either because certain options for action do not exist, or because the serial structures of their ensemble actively constrain these individuals in satisfying their needs and desires. Concrete instances of this can be the identification of exploitative labor conditions, a lack of political representation, control, or governmental regulation, or an overall lack of certain options for action. In a more abstract case, this limitation appears as the non-existence of any form of organization through which individuals may exert power over themselves.

7 More theoretical analyses of Sartre's theory of group formation can be found in Hartmann (1966) and Rae (2011), among others.

When these individuals actively demand or promote change and transformation, their response represents an active negation of the positing givenness prevalent in their serially structured ensemble. The response can be a riot, a public outcry, or any other spontaneous outburst of individuals who unite behind a common cause. Through this active and communal response, serial, parallel, and essentially competitive existence, as a purely exterior relation between human elements resulting from a passive synthesis, is transformed into communal and synthetic coexistence. The individuals of this group-in-fusion have interior, cohesive, and reciprocal relations with each other. Therefore, contrary to a series, a group-in-fusion must be understood as the result of an active synthesis through the spontaneous yet communal and unified response of its members (Rae 2011, 193).

As long as the constraints of serial structures pose a threat to the individuals of that group, the group-in-fusion may persist. If, on the contrary, the constraints no longer threaten, either because of the spontaneous actions of the group-in-fusion or because of other reasons, one of two things will happen to the group. Either it disintegrates because its *raison d'être* has vanished, or it organizes itself, given that it identifies the potential for similar threats to reappear (Rae 2011, 195).

When the group-in-fusion disintegrates, group members disperse into seriality. However, when the group-in-fusion attempts to organize itself, it represents a *statutory group* in the process of becoming an *organized group*. An organized group can be a political party, a social movement, a workgroup, or a task force—any larger constellation of people that actively attempts to organize itself. In this organized group, the functional interrelations between the human elements are seen to be communally structured, because groups act through the active mediation of their members. A newly founded political party, for instance, represents the whole of the intersubjective relations of its party members, both within the party and with people and conditions outside the party.

In organized groups, practical interrelations are conditioned by what Sartre refers to as the *pledge* of its members. As a "*practical device*" (Sartre 1978, 420, emphasis in original), the pledge has different functions and affects group members in multiple ways. It can be any group member's explicit commitment to recognize their role and the role of others for the functioning of the organized group. The pledge generates group cohesion in that it "simply allows each individual to promise to the other that he will act in a way that cares for and affirms the other's practical freedom" (Rae 2011, 196). Furthermore, by the pledge, each member is assigned a specific function—a form of conduct—upon which the larger organization depends as a functionally differentiated constellation. This allows an organized group to be more effective. In this regard, a pledge can be an oath to abide by certain rules, a creed featuring certain norms, or even the commitment to drive on the right side of the street. Furthermore, the internal organization of groups grows over time in response to the serially structured ensemble, as the functional requirements of the

organized group correlate negatively to the serial structures the group organizes itself against. Rather than dispersing like the group-in-fusion when the exigencies of the serially structured ensemble change, the organized group adapts itself to these serial structures. The action of each member is "directly conditioned by his functional relation to the other members of the group, as *already established* either by the group […] or by its representatives" (Sartre 1978, 446, emphasis in original). Like with the preliminary group-in-fusion, the human elements within organized groups have interior, reciprocal relations to each other, but they also remain as individuals, precisely because their commitment is what constitutes their group's form of organization. Therefore, no one is interchangeable in organized groups; the group continues to define itself against the exigencies of its instrumental field through the actions of the specific individuals that are its members. However, the human elements within groups do not dissolve into the larger organic unity of the group. Rather, a group is in the constant process of totalization as its unity is actively constituted through individual action (Sartre 1978, 407). According to Sartre, membership in organized groups enhances the practical freedom of each individual, as this membership is defined both by a committed response to common threats and by an affirmation of individual responsibility to protect the practical freedom of others in the group (Rae 2011, 201).

Institutionalization as (Re-)Serialization

The longer the organized group works against the serially structured practical ensemble, the stronger the group identifies itself through both its undertaking (as a negation of serial structures) and the specific way its functionally differentiated interrelations are structured. This eventually leads to an inversion of individual and group *praxis* so that the function and structure of the organized group is superimposed on the individuals who propelled the organization of the group through their functional roles in the first place. According to Sartre, "function, positing itself for itself, and producing individuals who will perpetuate it, becomes an *institution*" (Sartre 1978, 600, emphasis in original).

Members of institutionalized groups are passive function carriers rather than active promoters of the group's organizational structure. The pledge between members is replaced by a dictum stipulating functions and the details of how those functions are to be carried out. In this way, individual practical freedom is limited, whereas the overall possibilities for the institution's action may be increased. Consequently, in the transition from organized group to the institution, the ensemble transforms from a communally structured ensemble to an ensemble exhibiting serial characteristics. The members of institutions are now defined only by their functional role. Analogous to how practico-inert objects, as *interest*, designate their user and dispose the user to act in a certain way in serially structured ensembles

(see section 4.3), in institutions individuals are designated to act in certain ways in virtue of adopting a functional role (Sartre 1978, 602).

Rather than actively initiating and contributing to the overall form of organization through their committed actions, members of institutions perpetuate the institutions' organizational structure. This work is also accompanied by a concentration of authority, so that the sovereign of the institution "dictates how the institution will act, what it will be directed toward, and the manner in which each member will comport himself" (Rae 2011, 203). In political parties, for instance, individuals take the positions of party leaders, speakers, treasurers, and so on, with their interrelations governed by the party program; this arrangement occurs to streamline communication and distribute competences.

Depending on the functional requirements of the institution, the direction dictated by the sovereign, and the level of specialization necessary to fulfill their functions, the members of institutions are functionally interchangeable. This implies that the human elements in these ensembles need not be replaced with other human elements, for they can also be replaced with non-human elements. Although Sartre does not engage in this discussion in his analysis of institutions, he examines such a replacement of workers in his look at Taylorism, i.e. the attempt to optimize modes of production with the help of scientific analysis (Peaucelle 2000). Sartre claims that optimizing the labor process for maximum profit entails a de-skilling of individual laborers and their eventual replacement through what he refers to as *specialized machines*. In the case of replacing workers with machines, the labor process itself must no longer be understood as *praxis* in the form of human conduct, but as a mechanical operation (Sartre 1978, 562).[8]

This replacement can take place in institutions as well. Considering the regulation of traffic to be an institutionalized response to potentially dangerous modes of traversing streets, for instance, each road user's behavior is seen to be dictated by rules delimiting individual options for action for the sake of safer travel. Traffic lights function as active ways to control traffic, and street signs function as signifiers reminding road users to abide by prescribed regulations. Speed bumps and roundabouts function as passive, inert obstacles to which road users must adapt their behavior (Rosenberger 2014). Misconduct is sanctioned by various authorities who function as sovereigns.

8 In this context, Sartre also imagines the characteristics necessary for an *electronic brain* to control labor processes. He states: "There is no action so complex that it cannot be decomposed, dismembered, transformed, and infinitely varied by an 'electronic brain'; it would be impossible to construct or use an 'electronic brain' except within the perspective of a dialectical *praxis* of which the operations under consideration were merely a moment" (Sartre 1978, 561–562).

Structured Interrelations as Structural Moments of Totalization

Sartre's conceptual view on the transformation of practical ensembles does not only highlight group formation as a liberating process in which human beings free themselves from serially structured conditions. It also illustrates the compromises that individuals must make to organize themselves against inertia and scarcity. For various reasons, individuals may limit their practical freedom out of practical necessity. They consolidate forms of organization, re-distribute competences, and settle down to fixed strategies through which they satisfy their needs and desires. This allows these individuals to liberate themselves again and again and practically enact their ontological freedom. When nomad people, for instance, settle down to practice agriculture, they commit to a certain way of life at a certain place. By committing in such a way, these people gain the possibility to satisfy their requirements for food through their localized mode of production. In committing to such an agricultural mode of production, however, they also make it harder to leave, because their agricultural mode of production is constrained to a fixed place. They thus have the chance to liberate themselves from this coercion by, for instance, restructuring their mode of production. Sartre's way of framing this constant inversion from serial structures to communal structures and back accounts for the larger dimensions of his claim, that the dialectical progression of history must become intelligible—not as a natural law that dictates this progression, but as the complex outcome of simple, singular human interrelations with other human beings and their surroundings (see section 1.4).

At the same time, Sartre's anthropological focus allows him to reveal the fact that human existence is inherently situated in constellations in which serial and communally structured interrelations interplay. Although people may free themselves from structures that constrain their practical freedom, they must rely on other scaffolded, serial structures to provide them with a limited but manageable instrumental field of possibilities. Although extrasubjective forms of conduct have been poured into practico-inert objects and structures (see section 3.4) by whose use serial systems of interrelations are formed (see section 4.3), Sartre states that those who intend to transform these systems "must therefore have a project with a double aim: to resolve the existing contradictions by a wider totalisation, and to diminish the hold of materiality by substituting tenuousness for opacity, and lightness for weight" (Sartre 1978, 183). In this regard, the organizational schema of practical ensembles always involves worked and processually adapted matter as a "*minimum* of synthesized passivity […] that praxis must transcend towards the practical situation" (Sartre 1991, 128, emphasis in original).

Based on these considerations, it becomes evident that practical constellations never exhibit purely serial or communal structures. Rather, in most constellations, structures of seriality and communality can be understood to interconnect, inform,

and dialectically mediate each other in the constellations' totalizing processing. The institutionalized traffic regulations mentioned above, for instance, directly refer not only to material elements (pedestrians, drivers, cars, road infrastructure) that are governed but also to the fact that these elements are the ones whose interrelations, as governed by traffic laws, enact and thus totalize those laws in the first place. However, each of these elements exhibits different forms of structuring. The actions of pedestrians are differently structured to those of drivers, simply because the practico-inert objects and structures that pedestrians and drivers interrelate with mediate their actions in different ways. In the case of pedestrians, these objects and/or structures are the shoes they wear, the pavement they walk on, and the streetlights, for instance. The actions of drivers are serially structured by their specific car models, the road, other drivers, and so on. Although both pedestrians and drivers are situated in serial structures, their structures are not the same. Both are defined as structures by their specific forms of conduct, their material elements, and other factors. However, the actions enabled through these respective modes of structuring affect each other and thus contribute to the larger form of organization again.

According to Sartre, the fundamentally totalizing activities of human action and experience represent the very conditions of possibility according to which the operations of any larger form of organization must become intelligible in the first place.

Through Sartre's practical ensemble framework, a political party, for instance, can be analyzed as a structured whole that totalizes itself through its political work. The same party can also be analyzed regarding the way its members communicate via mobile phones, as these communicative processes represent structural moments in the party's overall processual totalization. Furthermore, the political party, understood as a practical ensemble, can also be understood as a partial totality that interrelates with other parties as partial totalities. The interrelations between these parties can again be understood to represent structural moments in the larger totalizing processing of the nationwide political discourse, for instance. This is further discussed in section 4.6.

4.5 Persistence

This section examines the dynamics through which practical ensembles persist. According to Sartre, there are two essential aspects affecting the persistence of practical ensembles in the material properties of their non-human elements and the totalizing actions of their human elements. The inertia and longevity of practico-inert means represent major factors in how practical ensembles maintain themselves. In that individuals identify instrumental means as their interest, both in the sense of means of subsistence and means of liberation, these individuals keep on perpetuating the inner structure of practical ensembles. This involves the maintenance of

current technological settings according to the demands and requirements of their practico-inert elements on the one hand (see section 4.3), and technological innovation and development on the other. However, Sartre does not discuss the historical becoming of technology in particular. He is much more interested in the processes involved in how people tackle scarcity or potentially adapt to it.

As mentioned before, Sartre claims that history "is born from a sudden imbalance which disrupts all levels of society" (Sartre 1978, 126) whenever individuals recognize that their exigencies are not taken care of through the practical ensembles they are situated in. However, this recognition itself can be obscured through the way human beings internally adapt to their role in practical ensembles, even if their structure does not allow individuals to tackle their own needs and desires but instead coerces them to abide by the exigencies of another material entity or collective. In this way, the perpetual disequilibrium of scarcity can be lived as an equilibrium, when it is preserved as *hexis*[9] (Sartre 1978, 126).

The concept of *hexis* has its roots in Aristotelian philosophy, where it derives from the Greek verb *echein* (English *to have*). The noun can be translated as *habit*, *state*, *disposition*, (fundamental) *attitude*, or *characteristic*, although none of these translations fully captures its Greek meaning.[10] *Hexis* represents an "entrenched psychic condition or state which develops through experience rather than congenitally" (Lockwood 2013, 22), and which disposes the actions of agents who *have* or *hold* (Greek *echein*) this condition or state.

The conceptual dimensions of *hexis* in Sartre's philosophy are hard to pinpoint. The concept itself is not clearly defined by Sartre, nor is it well developed throughout his works. Furthermore, Sartre's conception of *hexis* changes from *Being and Nothingness* to *Critique*. Sartre's *hexis*-concept combines aspects of Aristotelian philosophy, habits, Maussian *habitus* (Mauss 1934, 1973), and processes of habituation, among other sources. Sartre discusses an individual's "habits (in the Greek sense of ἕξις)" (Sartre 2021, 232) in the context of the qualities of the *Ego*[11] in *Being and Nothingness*. In *Critique* he conceptualizes *hexis* as an action disposition that agents develop by

9 According to Barnes, the translator of the 2003 Routledge edition of *Being and Nothingness*, Sartre seems to have ignored the rough breathing of the Greek term ἕξις (Sartre 2003, 2). In *L'être et le néant,* Sartre uses the Greek spelling ἔξις. In *Critique de la raison dialectique,* he uses the spelling *exis.* Given that ἕξις or *hexis* is not only a technical term in Greek philosophy but also has become an established term in the philosophy of habits, the spelling *hexis* is used in this work. In some quotations from Sartre's works, where the term *exis* appears, it is replaced with *hexis* in brackets.

10 These translations refer to Lockwood (2013) the German glossary provided by Wolf in Aristotle (trans. 2015), and the LSJ entry on ἔχω (n.d a).

11 In Sartre's philosophy, the *Ego* refers to a person as a psychological unity. Sartre states: "It is as an *Ego* that we are subjects *de facto* and subjects *de jure*, active and passive, voluntary agents, possible objects of evaluative judgment, or a judgment of responsibility" (Sartre 2021, 232).

interiorizing practical relations through repetition. It is here where Sartre explores the societal significance of *hexeis*.

When agents develop a *hexis* by repeating certain practical relations, the course of these relations, in combination with the instrumental means used in them as well as the structural context they are situated in, pass into and become incarnated in the agent's corporeality. There they remain as passive residuals or imprints of former actions. In this way, the practical relations themselves have become practico-inert in the agent's bodily inertia. The reason why agents repeat certain practical relations is that these practical relations allow the agents to attain desired ends under certain conditions. The action disposition developed this way disposes the agents who *hold* it to perpetuate these practical relations in similar ways under similar conditions. In this regard, *hexis* represents a condition of possibility for the persistence of practical ensembles.

Unfortunately, Sartre studies have neglected the significance of *hexis*. This might be because Sartre's later work has gained considerably less academic attention than his early works, or it could be because *hexis* has connotations of a passive and materially inert behavior that contrasts with free and creative *praxis* (Flynn 1997, 94). Another reason might be the predominance of Merleau-Ponty's *Phenomenology of Perception*, to which philosophers seem to resort to for phenomenological research on habits and embodiment.[12] However, despite this inattention, *hexis* not only represents an important aspect of Sartre's theoretical conception of practical ensembles, but an ineluctable fact of human existence and reality more broadly.

To get a more general understanding of the mechanisms and principles underlying Sartre's conception of *hexis*, it is useful to reflect upon them against the context of other philosophers who put a similar emphasis on the societal implications of a person's habituated actions.

The Societal Implications of Hexis and Habit

In *Nicomachean Ethics*, Aristotle reflects upon a person's *hexis* in the context of his thoughts on *praxis* and *poiesis*. According to Aristotle, human action can be described by the aspects of *praxis* and *poiesis*, among others. Depending on whether actions are predominantly seen under the aspect of *praxis* or *poiesis*, different guiding principles can be applied through which the course and results of these actions can be assessed (Luckner 2005, 81–82). Under the aspect of *praxis*, an action is understood as a goal-directed activity that has its end in itself. Such activities include political control and regulation, law, and music, but also other activities aiming at the development and preservation of one's capacity to act (Hubig 2013b, 23). The guiding principle of *praxis*

12 For a juxtaposition of Sartre's and Merleau-Ponty's conceptions of habit and embodiment, see Crossley (2010).

is *phronesis*, Greek for *prudence*. *Phronesis* can also be translated as *practical reason* or *practical wisdom*. As such, it represents a *hexis praktike*, a disposition toward action under the aspect of *praxis*, according to which agents can reflect on whether actions are good or bad regarding their success in attaining certain ends under specific circumstances (Lockwood 2013, 24; Aristotle trans. 2015, 199).

Under the aspect of *poiesis*, an action is understood as a *making* that has its end in the effect or thing it brings into being. Such activities include productive processes such as baking, tailoring, forging, writing, and so on, but also any applied sciences that aim at producing or reproducing certain effects. Similarly to *phronesis* in the case of *praxis*, *techne* serves as the guiding principle of *poiesis*. In this regard, *techne*, as a *hexis poietike* (Lockwood 2013, 24), represents a disposition toward action (under the aspect of *poiesis*) according to which agents can reflect on and act based on how things could be brought into being, especially regarding the fact that these things need not necessarily be constituted in one specific way, but could be constituted in other ways (Aristotle trans. 2015, 198). Furthermore, Aristotle not only understands *techne* as a reflective disposition but also as the right knowledge about the relation of means and ends in the course of actions (Hubig 2006, 51–52). Good *poiesis* results in the accordance of constitutive principles with the things or effects brought into being.

Agents constitute such dispositions by repeating specific actions whose course is oriented toward mediation of *praxis* and *poiesis* aspects, among others, regarding the quality of attained ends (Hubig 2006, 52). *Phronesis* and *techne* represent intertwined *hexeis* that agents develop over time as a result of internalizing constitutive principles, the interplay of means and ends, and the situation-specific adequacy regarding the quality of actions. Once developed, these *hexeis* guide the agent's actions according to internalized principles without strictly determining the actions' exact course. Lockwood mentions that the *hexis* of justice, which capacitates agents to act in a just manner, does not imply that these agents always act in the same way (Lockwood 2013, 24). In this example, the interplay of different *hexeis* and their dispositional qualities are illustrated by the fact that what is just in one instance might not be just in another but must be adequately adapted to the respective situation. This means that both *phronesis* and *techne* must inform the action.

Ultimately, the concept of *hexis* plays a significant role in Aristotle's conception of virtues. Given that *hexeis* develop over time—by repeating actions in correspondence with certain principles, according to which these actions can be assessed for their efficacy in attaining ends—agents are responsible for their *hexeis*. It is up to them to develop dispositions according to which actions may be performed in a virtuous manner (Lockwood 2013, 25). In this regard, Aristotelian *hexis* represents an active and agent-driven condition, state, or disposition that capacitates the respective agents to act in accordance with internalized principles and norms. However, since a person's practical conduct of life is always situated in a social context, the *hex-*

eis necessarily have a social function as well. They enable individuals to adapt their actions in situational dependence to the constitutive principles of their social context. Thus, already in Aristotle, *hexis* has a social-constituting function through its action-disposing function. It enables, to an extent, the harmony of action and social order.

In James' *The Principles of Psychology I*, habits—deriving from the Latin *habitus* which is the Latin equivalent of Greek *hexis*—have similar implications for the relationship between an individual and their social context. According to James, habits have immediate ethical implications, as they enable individuals to consistently perform those actions that mark their place in society. James has a wide understanding of *habits*, which he claims to exist "*due to the plasticity of the organic materials of which* [the bodies of material entities] *are composed*" (James 1890, 105, emphasis in original). In this regard, an automated action learned through repetition is as much a habit as callous hands are, caused by manual labor. According to James' understanding, habits have a certain bodily inertia through which societal dynamics are preserved and perpetuated.

James describes the mechanics of habit formation analogous to the formation of trample paths:

> [A] simple habit, like every other nervous event […] is, mechanically, nothing but a reflex discharge; and its anatomical substratum must be a path in the system. The most complex habits, as we shall presently see more fully, are, from the same point of view, nothing but *concatenated* discharges in the nerve-centers due to the presence there of systems of reflex paths, so as to wake each other up successively. (James 1890, 107–108, emphasis in original)

According to James, once habits are formed, they have concrete practical implications. First, habits simplify "*the movements required to achieve a given result, makes them more accurate and diminishes fatigue*" (James 1890, 112, emphasis in original). Second, habits reduce "the conscious attention with which our acts are performed" (James 1890, 114, emphasis in original). Habituated actions are thus more efficient and unconscious. Most importantly, James connects agents to their material environment through their habits. He mentions that habituated actions are not preceded by conscious choice or deliberation. Rather, "[i]n action grown habitual, what instigates each new muscular contraction to take place in its appointed order is not a thought or a perception, but the *sensation occasioned by the muscular contraction just finished*" (James 1890, 115, emphasis in original).[13]

13 In the psychology of habit, habitual behavior is understood as an automatic and not goal-dependent response that activates by recurring context cues (Wood & Rünger 2016). Habit formation is a form of learning that takes place when actions performed to attain certain desired goals in different contexts—environmental settings, after certain other actions, in

Habits thus allow a person to cultivate a way of life that can be enacted without much conscious thought or even effort. James also mentions another aspect of habits that, although not present in Aristotle's conception of *hexis*, seems to represent an aspect of Sartre's *hexis*-concept. James states that habits allow individuals to withstand the hardships of their labor.[14] James is convinced of the conservative power of habits for society:

> Habit is thus the enormous fly-wheel of society, its most precious conservative agent. It alone is what keeps us all within the bounds of ordinance, and saves the children of fortune from the envious uprisings of the poor. It alone prevents the hardest and most repulsive walks of life from being deserted by those brought up to tread therein. It keeps the fisherman and the deck-hand at sea through the winter; it holds the miner in his darkness, and nails the countryman to his log-cabin and his lonely farm through all the months of snow […] It dooms us all to fight out the battle of life upon the lines of our nurture or our early choice, and to make the best of a pursuit that disagrees, because there is no other for which we are fitted, and it is too late to begin again. It keeps different social strata from mixing […] It is well for the world that in most of us, by the age of thirty, the character has set like plaster, and will never soften again. (James 1890, 121)

For both Aristotle and James, *hexeis*/habits result from how an individual agent repeatedly conducts certain forms of behavior in a social context. *Hexeis*/habits form

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connection to a specific person or group—repeatedly reward the agents who perform these actions. Once habitual behavior is developed, the context, rather than the goal itself, triggers the respective behavior (Wood & Neal 2007). This may not involve the agent's intention to attain their goals in the exact same way prior to performing the action (Neal et al. 2012). Lastly, because habitual behavior is contextually triggered, inhibiting such behavior must involve an active decision by an agent (Quinn et al. 2009). Changing contextual cues by changing the material setting the behavior takes place in, for instance, is a major factor regarding whether a habit can be broken or not (Verplanken & Wood 2006). As a consequence, habitual behavior can persist when agents remain in the context in which the behavior is triggered, despite the fact that this might directly conflict with the agents' current motives (Neal et al. 2011). However, the persistence of habitual behavior is not necessarily a bad thing, depending on the way in which the outcome of the respective behavior is assessed. Eating habits that, for instance, lead to a more consistent or healthier nutrition can be considered positive or good habits for agents who engage in that behavior, whereas a habituated intake of high-calorie, sugary drinks instead of water may yield negative consequences and can thus be considered a bad habit (Wood & Neal 2016).

14 In behavioral psychology, the process he refers to is known as *habituation*. Habituation refers to a process in which a repeated application of a stimulus results in a decreased response by the agents subjected to that stimulus. Withholding the stimulus leads to an increase in response. The intensity of stimuli affects the rate of decrease or increase in the agent's response (Thompson 2009).

over time in accordance with the norms and rules of this social context. In this way, *hexeis* stabilize the practical interrelations between a person and their larger form of societal constellation.[15]

Sartre's Hexis as Action Disposition

The instances in which Sartre refers to *hexis*, and how he utilizes the concept, suggest it to be a combination of aspects from Aristotelian philosophy, James' habit formation, habitual behavior, and processes of habituation. With this combination, Sartrean *hexis* is closely connected to his conception of the practico-inert (see section 3.4), or, more precisely, to his thoughts surrounding the *inertia* of material entities (see section 2.3). However, as regards *hexis*, the *inertia* in which certain forms of conduct are imprinted is not provided by the materiality of artificial objects but by the human body as a material entity itself. The practico-inert in peoples' *hexis* refers to the fact that this *hexis* expresses the mode of their production, i.e. the repeated structured interrelations in certain forms of societal organization. The material inertia of *hexeis* affects the persistence of practical ensembles, as the structure of these ensembles is automatically perpetuated by internalized practical relations between human beings, instrumental means, and scarce environments. As is the case with many of his philosophical concepts, Sartre develops his outlook on the concept of *hexis* throughout his early and later works.

In *Being and Nothingness*, Sartre briefly speaks about *hexis* in the context of his description of the human psyche. He mentions that the *Ego*'s qualities (French *qualité*) "represent the set of virtualities, latencies, and potentialities that constitute our character and our habits (in the Greek sense of ἕξις)."[16] Among these qualities, Sartre mentions "to be quick-tempered, hardworking, jealous, ambitious, sensuous, etc." (Sartre 2021, 232). He also mentions qualities that originate from a human being's history, which he refers to as *habitudes*—French for *habits*—in *Being and Nothingness:*

> I may be *aged*, *weary*, *embittered*, *diminished*, or *making progress*; I may appear to myself as 'having grown in confidence since my success' or, on the contrary, as 'gradually developed the tastes, habits [French *habitudes*], and sexuality of a patient' (after long illness). (Sartre 2021, 232, emphasis in original; Sartre 1943, 197)

With the French term *habitude*, he thus refers to both acquired qualities and to that which is constituted by the interplay of these qualities—which Sartre calls *hexis* in the Aristotelian sense. However, it is difficult to make a clear distinction between

15 For a more detailed juxtaposition of Sartre's conception of *hexis* with that of Aristotle and William James, see Siegler (2022a).

16 The original quotation reads as followed : "l'ensemble des virtualités, latences, puissances qui constituent notre caractère et nos habitudes (au sens grec de ἕξις)" (Sartre 1943, 197).

Sartre's understanding of acquired properties as habits and *hexeis*. This is because these properties, in contrast to states of the *Ego*, do not exist *in actu*, i.e. in human existence as a *praxis*-process through actions. Rather, they exist *in potentia*, as possibilities of being and as innate mental dispositions (French *disposition d'esprit innée*) which qualify a person (Sartre 1943, 197; Sartre 2021, 233).

Hexeis can thus not be explicitly experienced, but are implicitly revealed in the way they condition actions. Against the background of Sartre's primacy of human action, and on account of his recourse to the Greek term *hexis* (ἕξις), the interaction of certain properties of the *Ego* can thus be understood as *hexeis* in the sense of the Aristotelian action disposition. For Sartre, a *hexis* represents an interiorized disposition according to which agents, by virtue of their corporeality, psychic constitution, and historicity, are inclined to perform their totalizing actions in a certain way. This means that they satisfy their requirements, wants, and wishes according to established strategies acquired from their age, experiences, and pathologies.

In *Critique*, Sartre illustrates his conception of *hexis* with the relation between specialized laborers and instruments. He refers to this relation as a "technical bond [French *lien technique*]" that involves both the instrument, as a practico-inert object in which meaning has been imprinted (see section 3.4), and the "becoming-instrument of the specialised agent [French *devenir-instrument de l'agent spécialisé*]" (Sartre 1978, 455; Sartre 1960, 467). Sartre explicitly mentions training and professional instruction as forms of learning through which the instrument eventually "exists as an [*hexis*] in the practical organism" (Sartre 1978, 455) of the specialized agent. This form of imprinting in the very corporeality of agents who interrelate with the instrument regularly is fundamental for instrument-agent interconnection. According to Sartre, the "[*hexis*] of the specialist must correspond to the signifying interconnections of the parts of a machine (or tool), as an inter-connection of assemblies" (Sartre 1978, 455). In this regard, the *hexis* of specialized agents forms through practice, training, and familiarization. It thus enables these agents to form assemblies with instruments to perform actions as a unit. The fact that this *hexis* is supposed to exist *in* the practical organism implies both a form of disposition these agents *hold* (in the sense of Aristotelian *hexis*), as well as a habitually internalized way of handling instruments as a human-machine hybrid (Weber 2020). However, what Sartre exactly means with *hexis* can be scrutinized by juxtaposing it with *praxis*. According to Sartre,

> *praxis* is the temporalisation of [*hexis*] in a situation which is always individual […] action defines itself here as the simultaneous transcendence of assemblies by the tool [French *des montages par l'outil, de l'outil par les montages, et de l'ensemble par un processus orienté que des possibilités futures ont suscité du fond de l'avenir*], of the tool by assemblies, and of the whole by a directed process which future possibilities have occasioned in the distant future. There can be no [*hexis*], no *habit* without practical

> vigilance […] without a project to actualise them by specifying them. Thus [*hexis*], as an enriching limitation of the common individual, manifests itself concretely only in and through a free practical temporalisation. (Sartre 1978, 455–456, emphasis in original; Sartre 1960, 467–468)

Sartre seems to use *hexis* and *habit* synonymously and describes them as something that, although passively present in the corporeality of agents, capacitates these agents to perform actions in certain ways—as inter-connected in assemblies, for instance—while allowing them to maintain their ontological freedom to act for themselves. Consequently, Sartrean *hexis* must be understood as a structured and structuring disposition that guides the agents' actions, rather than as a mere pattern of habitual behavior that triggers in specific contexts. Although "[r]outine opposes initiative" (Sartre 1978, 456) through *hexis*, this does not pose a problem initially for the agents. Their *hexis* simply capacitates them to form assemblies with the signifying parts of instruments to perform actions as an interconnected or coupled unity. Sartre implies a dialectic between two things: an agent's *hexis*, understood as a vigilant capacitating disposition that lays dormant until it realizes a goal-directed action with certain instrumental means; and the practical inertia of those instrumental means that also lays dormant until realized in the course of totalizing action. He frames this dialectic as an instantiation of the interplay between *active passivity*, in the form of the agent's action disposition, and *passive activity*, in the form of the material disposition of the practico-inert (see section 3.4) through contextually structured action situated in practical ensembles (Sartre 1978, 449, 603). His example is a pilot steering an airplane. He mentions that, at least in itself, the power of the airplane (as a practico-inert material disposition) is not that of the pilot. However, the specialized *praxis* of the pilot, in connection with the pilot's *hexis*, capacitates them to practically realize the power of the airplane by coupling with it. In this way, the airplane's power becomes the pilot's power on the basis of the position the coupled assembly adopts in the larger structural context of a practical ensemble like an airport, in which this assembly would be situated (Sartre 1978, 454).

In their everyday lives, human beings form coupled assemblies with the implement-things of which their practical field of equipmentality and possibility consists. People sit on couches, drive cars, cook on their stoves, and swipe on their smartphones. Their *hexis* enables these human beings to adapt to and routinize the very activities through which they efficiently, effectively, and repeatedly satisfy their needs and desires. A *hexis* thus represents a way in which individuals "maintain […] the practical reality of [their] body as that of an instrument for directing instruments" (Sartre 1991, 261); or, in another sense, *hexis* is a way for individuals to maintain and possibly adapt their status as the center of a field of equipmentality within their re-

spective practical ensemble (see section 3.2).[17] From Sartre's statements, it is not exactly clear whether *hexis* only applies to bodily actions or whether it encompasses all forms of practical interrelations. However, Sartre's insistence on the fundamental materiality and equipmentality of human existence allows one to suggest that Sartre's *hexis* develops through all forms of practical human-world relations.

If this is the case, what Sartre refers to as the *attitude* certain groups have in virtue of their class-being (see section 4.3) represents the whole of internalized practical interrelations, as action dispositions, that have been structured through the historical situation of the respective class. Through this class-*hexis* people are disposed to act according to their class-structures. Section 4.3 mentioned that these class-structures are the result of how a person's strictly limited practical field, i.e. their practical means of subsistence, are assigned to them by means of their situation in practical ensembles. Individuals continuously act as structured by a *hexis* resulting from how they realized themselves through their historically limited and practical equipmental field of possibility in the past. Their *hexis* thus furthers the cut between their concrete individual subjectivity and the concrete subjectivities and objectivities of their surrounding elements, based on the properties of their material milieu (see section 2.4).

Consequently, human beings are adapted to their socioculturally structured material milieu through their *hexeis* in a fundamental way. A *hexis*, as *active passivity*, results from their acquired modes of satisfying their needs and desires with their *passively active* equipment at hand. This materially incarnated interplay between *active passivity* and *passive activity* scaffolds a materially inert path for their existence through which they not only agentially distinguish themselves from other people within their practical ensemble, but also from other people outside their ensembles. By enacting their concrete subjectivity, they also enact the structures of their practical ensemble, because these structures enable their concrete agential enactment in the first place. With these implications and their shared roots in Mauss' thoughts on body techniques and *habitudes*, Sartre's *hexis* comes close to Bourdieu's concept of *habitus*.

Despite similarities between Sartre's understanding of *hexis* and Bourdieu's conception of *habitus* (Latin for *hexis*, see above), however, Bourdieu himself seems to overlook Sartre's thoughts on the formation of habitual behavior. In *Outline of a Theory of Practice*, Bourdieu criticizes Sartre's apparent neglect of long-lasting action dispositions (Bourdieu 1977, 73–76), while using the term *hexis* himself in the sense of

17 The fact that *hexeis*, as action dispositions, form over time and depend on a specific, historically dependent practical field of equipmentality and possibility, puts them thematically close to the formation of *operational sequences of action* in the sense of Leroi-Gourhan's *chaînes opératoires*. See Leroi-Gourhan (1988) and Schlanger (2020).

body *hexis*. A body *hexis* is a "pattern of postures that is both individual and systematic, because linked to a whole system of techniques involving the body and tools, and charged with a host of social meanings and values" (Bourdieu 1977, 87). In contrast, Bourdieu defines *habitus* as a system of "durable, transposable *dispositions* […] objectively adapted to their goals without presupposing a conscious aiming at ends […] collectively orchestrated without being the product of the orchestrating action of a conductor" (Bourdieu 1977, 72). Bourdieu makes a more nuanced distinction between the way agents are disposed to perform bodily actions and the way they situate themselves in larger social constellations through their actions. He states:

> The habitus is both the generative principle of objectively classifiable judgements and the system of classification (*principium divisionis*) of these practices. It is in the relationship between the two capacities which define the habitus, the capacity to produce classifiable practices and works, and the capacity to differentiate and appreciate these practices and products (taste), that the represented social world, i.e., the space of life-styles, is constituted. (Bourdieu 1996, 170, emphasis in original)

Whereas the sociologist Bourdieu is more aware of the social principles, structures, and classifications implied by a person's *habitus*, the philosopher Sartre seems to conceptualize a person's *hexis* as a mediating moment between their practically totalizing existence and the consummation of their mode of societal organization. These express the fundamental attitude (French *attitude fondamentale*) of a person's class-being (Sartre 1978, 232; Sartre 1960, 289).

Transforming Needs into Desires and Perpetuating Practical Ensembles

Although the initial relation between *praxis* and *hexis*, between initiation and routinization, might not pose a problem for individuals, the case is different when conceived in the context of practical ensembles. The development of a *hexis* is not limited to specialized agents but rather applies to all human beings that act regularly to satisfy their needs and desires in differently structured practical ensembles. The process through which *hexeis* form is accompanied by the transformation of abstract needs as *besoins* into concrete desires as *désirs*. Through repeated interaction with certain instrumental means, and repeated re-interiorization of the effects of the performed courses of action, agents form bodily and practically inert action dispositions. These correspond to the very means that enable them to attain their ends. Thus, these agents are both predisposed to act in a specific way and also project toward those strategies and courses of action that have allowed them to be successful in their endeavors.

In this way, practical ensembles can establish a certain state of equilibrium in terms of how the needs, desires, and demands of their elements are covered. This

can happen through political control and regulation, social stratification and unification, technological development, and efficient use of means to ends, among other manners, in a given mode of production or form of organization. The condition under which this equilibrium may be preserved is the practical inertia of artificial objects and the *hexis*, "both as a physiological and social determination of human organisms and as a practical project of keeping institutions and physical corporate development at the same level" (Sartre 1978, 126).

Consequently, *hexis* itself has practico-inert qualities, in that it manifests the agential counterpart of certain forms of conduct. These forms express a certain mode of how individuals incarnate their actions in their corporeality (Sartre 1978, 618). In the larger context of practical ensembles and their role in the struggle against scarcity, *hexeis* can be understood as the immaterial culture, or, more precisely, the immaterial side of strategies employed by individuals and constellations to tackle needs and desires arising as a result of their specific socioculturally structured relation to a scarce material environment (see section 4.2)

Hexeis thus play an essential role in the persistence of practical ensembles. By forming stable, practical relations through their position in practical ensembles, individuals can attain their ends. Given that these relations prove to be successful, individuals tend to repeat such actions. In practical ensembles with a serial structure, individuals may even be coerced to attain their ends in very specific and limited ways. This, according to Sartre, leads to an internal adaptation in the form of *hexis* through which historically situated individuals perpetuate those actions that already reinforce the structures of practical ensembles (see section 4.3). In *Critique II*, Sartre even refers to *hexis* as an "eternal return [French *éternel retour*] [...] the permanent unity of the organism inasmuch as it is *living;* it is life itself, creating for itself its determinations of inertia. But this *hexis* [...] rejects the dispersion of exteriority" (Sartre 1991, 345, emphasis in original; Sartre 1985, 355).

Hexeis not only further stabilize the internal structure of practical ensembles; they also establish norms for the way practical ensembles are supposed to be structured. These structures can be passed on to later generations by maintenance through practico-inert objects and routinized actions based on individuals' *hexeis*. However, for these later generations, the structures of their practical ensemble are not intelligible as the result of the totalizing formation and transformation processes at first. Rather, for these individuals, the inherited practical ensembles present themselves as totalities, as fixed structures that dispose how needs and desires are to be taken care of. According to Sartre, this "ideologically corresponds to a decision about human 'nature'" (Sartre 1978, 126). Later generations may perceive the structures of their practical ensemble—such as their form of government, the modalities of their labor processes, or the unequal treatment of men and women, for instance—as if these structures were something that is somehow irrefutably given by default. In this way, *hexeis* make various forms of distinction, injustice,

and unfairness within a society appear to be historically legitimized. Of course, this perception is reinforced by the fact that the current way in which practical ensembles are structured indeed provides individuals with efficient and effective ways to attain their ends.

This perception may also lead to a perpetuation of conditions under which individuals perform actions that do not necessarily allow them to do so. Individuals may even perpetuate certain exigencies instead of dissolving them without realizing it. Because individuals continuously face conditions of hardship, such as chronic hunger, for instance, these conditions can become interiorized and structured. As a consequence, need no longer represents "the violent negation which leads to *praxis*: it has passed into physical generality as [*hexis*], as an inert, generalised lacuna to which the whole organism tries to adapt by degrading itself, by idling so as to curtail its exigencies" (Sartre 1978, 95, emphasis in original). The *hexeis* of historically situated individuals systematically reproduce the negative side effects of the success factors of practical ensembles, such as exploitative labor conditions and social inequality. These negative side effects thus represent complex *persistent problems* that are difficult to both grasp and manage, because they result directly from the way that the systematic provision of goods and services in these ensembles—by which individuals sustain themselves—is organized and practically realized (Schuitmaker 2012). Because such persistent problems result from the functioning of practical ensembles themselves, tackling them is possible only by transforming how these ensembles are structured (see section 4.4).

Through their *hexeis*, however, individuals adapt to these persistent problems. Rather than questioning how the machinations of their practical ensemble produce and reproduce specific modes of inequality and poverty, they accept that their historically fabricated suffering is, despite its concretized form in practical ensembles, an abstract given of the human condition. In this regard, Sartre's *hexis* has conceptual similarities to processes of habituation. He states that "[a]n integral praxis, suffered (interiorization) and repeated (exteriorization) by thousands or millions of agents […] becomes at once the *being* (serial impotence, relapse into *hexis*, fate as a suffered future) and the *act*" (Sartre 1991, 282, emphasis in original).[18]

Contrary to James' rather optimistic understanding of habit as the fly-wheel of society, Sartre's conception of *hexis* represents much more of a feedback loop of history. Their relative success in attaining some ends in some ways, despite other exi-

18 There might also be a line of thought connecting Sartre's view on *hexis* with that of Maine de Biran and Ravaisson. In *Being and Nothingness*, Sartre quotes Maine de Biran's 1803 *Influence de l'habitude sur la faculté de penser* in discussing the *sensation d'effort*, i.e. the sensations of one's own action. In *De l'habitude*, Ravaisson mentions that he was influenced by the double law of habit that Maine de Biran introduced in *Influence* (Ravaisson 2008). The double law of habit connects processes of habit formation with habituation processes (Grosz 2013).

gencies, causes individuals to repeat these actions and thus reinforce the structures of practical ensembles (see section 4.3). This repetition entails the development of *hexeis* through which individuals adapt to their means of subsistence, to the strategies to employ these means, and to the other exigencies they suffer from. As a result, the practical ensembles they are situated in stabilize because individuals become desensitized to those exigencies. After all, identifying them might cause them to transform their ensembles, and individuals create even stronger associations between some of their ends and the available means and strategies provided by their ensemble.

Under the aspect of *hexis*, practical ensembles can be understood as *autopoietic* systems that organize the reproduction of their elements so as to maintain themselves through their elements (Ally 2017, 168–173). Ally shows that Sartre himself advocates such an autopoietic understanding with regard to human beings as biological organisms (Ally 2017, 444) (see section 2.4). However, as regards practical ensembles, it can be assumed that Sartre himself would ultimately refrain from tracing their autopoietic aspects back to a supposed organismal nature. Sartre's whole argument consists in showing that practical ensembles result from the *praxis* of their human elements and eventually act back on them, through material inertia, both in objects and the human body. Practical ensembles must thus be understood as cultural techniques that dynamically develop on certain paths and adapt to enable the provision of goods and services based on human *praxis*. Eventually, this generates an inner logic that overwhelms the individuals who employed those techniques, so that they become perpetuators and not initiators of practical relations.

However, even though these individuals are supposedly trapped in potentially adverse circumstances through *hexis*, they must still be understood as ontologically free. Although their *hexis* might "scarcely resemble a *praxis* […] in fact, it is a *praxis*: habit is directed and organised, the end posited, the means chosen" (Sartre 1978, 325, emphasis in original). Without *hexis* every human action would be a creative and revolutionary endeavor, but it would not be a *praxis*, as it would ultimately lack the underlying structures qualifying it as a transcending negation of the given and as a totalization toward the future. Although individuals might be locked into their position in practical ensembles, they still can recognize that the structures of their practical ensembles do not provide for some of their needs and desires (see section 4.4). In this regard, the structures of their *hexeis* may even capacitate them to effectively change their situation.

Obscuring Existential Liberation and Necessitation

Even though *hexis* is an overlooked concept, neglected by Sartre and his scholars alike, the significance of *hexis* for understanding the larger implications of Sartre's

later philosophy must not be underestimated. To make this clearer, a larger argument is formulated.

In Chapter 1, it was mentioned that Sartre's early and later works attempt to cover two aspects of human existence that seemingly exclude each other, but that overlap, inform, and mediate each other. These aspects were referred to as the internal and external dialectics of human existence. From a perspective on the internal dialectic of human existence, human beings may perceive themselves as ontologically free agents who choose how they realize themselves and thus give rise to structures of practical necessity. Practical constraints represent merely hypothetical constraints for these individuals, and the responsibility for their lives is theirs alone. This experience corresponds to the thematic focus of *Being and Nothingness*. The internal dialectic of human existence is involved in a constant process of mediation with the external dialectic.

From a perspective on the external dialectic of human existence, human beings must be understood as situated in practical ensembles that scaffold and partially necessitate how these human beings can realize themselves. Although ontologically free, practical freedom is delimited and potentially constrained in ways such that it may result in categorical coercions. This experience corresponds to the thematic foci of *Search for a Method* and *Critique of Dialectical Reason*. For Sartre, both levels of lived experience—therefore, both planes of existential reality—represent the larger existential tension in which human existence, as a lived contradiction (see section 1.4), is situated, and to which it further contributes through the situated mediation of action and experience.

Against this background, the existential tension, as an oscillation between processes of liberation and necessitation, is itself obscured by structures of *hexis*—by the fact that human beings familiarize, routinize, and naturalize what is and what works for them in some way or another so that it becomes something that *should* be the way it is. In the spirit of Sartre's *force des choses*, this process of how an *is* becomes an *ought* through familiarization and naturalization is not that problematic on its own. It allows consistency in terms of problem-solving in combination with more efficient usage of cognitive capacities, such as deliberation and reflection. Furthermore, it allows adaptation and an eventual increase in effectiveness, both in terms of utilized means and the way these means are put to use, among other things. Not only individuals but also societal constellations may benefit from these forms of relief and optimization, especially because *hexis* allows for the stability of these constellations, consistency in means-ends relations, and reproducibility of results.

However, it is precisely in combination with time that these larger constellations manifest effects that may stabilize practical ensembles beyond a point where they may easily be changed. The relatively simple practical relations, comprising the processes through which the complex structures of practical ensembles are actually formed and transformed, generate their own normativity over time through repe-

tition and internalization. The result is that the formation and, therefore, the principal contingency of these structures is obscured. Ultimately, this obscures the underlying oscillation of liberation and necessitation that human existence consists of. This is the very core of Sartre's point in his interview with *New Left Review*, where he mentions that his view on the power of circumstances was obscured by his earlier emphasis on the internalities of human existence without his coordinating—in the sense of *mediating*—them with the externalities of historical situations (see section 1.3). Neglecting the fact that human beings, although ontologically free, create the very patterns that lock them in their daily lifeworlds until these patterns become humanized themselves, ultimately overestimates the interior self-relation while it plays down the power of exterior circumstances.

In this regard, the true power of Sartre's theory of practical ensembles lies in its de- and reconstructive potential and its focus on the underlying dialectic of human existence. Understanding a constellation of human and non-human elements as a practical ensemble is to approach its constitutive factors, i.e. the role of human agency in the formation and transformation of this ensemble, the exigencies of its elements, and their possibilities and constraints. It allows one to deconstruct totalities and reconstruct the synthetic processes through which those totalities came to be. Furthermore, this approach illustrates how the inertia of these ensembles increases over time and is preserved, both in the inert materiality of things and in the human body. Lastly, Sartre's theory shows that the changing inert structures and routines that consolidate practical ensembles must involve some form of material intervention. Because human actions "*become Being* […] they cannot be dissolved into knowledge even if they are deciphered and known. Only matter itself, beating on matter, can break them up" (Sartre 1978, 178, emphasis in original).

4.6 Crisis and Disruption

In this section, the last aspects of practical ensembles are discussed, namely their crisis and potential disruption through what Sartre calls *counter-finalities*. In addition to *hexis*, *counter-finality* is another concept of Sartre's later philosophy that is somewhat underrepresented in Sartre studies. It observes that the overall form of organization of practical ensembles does not just affect the elements comprising these ensembles. The overall totalizing processing of practical ensembles might also generate external effects through which these ensembles act back on themselves in what can be called an action at a distance.

A counter-finality occurs when external effects threaten the finality of practical ensembles and their very mode of structural organization. The effects generated by practical ensembles act back on the ensembles by proxy of another sector of ma-

teriality. Whether this other material sector can itself be understood as a practical ensemble depends on its mode and form of constitution.

Counter-Finality and Crisis

Sartre illustrates his understanding of counter-finalities with the historical situation of Chinese farmers. As a practical ensemble, the farmers are organized around an agricultural mode of production. This mode of production means that they deforest the landscape they inhabit to prepare the soil for future agrarian use. In so doing, the farmers eventually eliminate natural boundaries that would otherwise prevent flooding. With these boundaries removed, the farmland is flooded. Eventually, the farmers and their whole form of organization are in a critical situation.

Sartre derives three conditions for the formation of counter-finalities: the given fact of a disposition of matter, the becoming-inert of human *praxis*, and the serial ubiquity regarding this *praxis* (Turner 2014, 40). Based on these conditions, the formation of counter-finalities can be reconstructed. The first and most obvious condition is that the possibility of a counter-finality "should be adumbrated by a kind of *disposition* of matter" (Sartre 1978, 162–163, emphasis in original). According to this first condition, the material sector from which counter-final effects arise must be disposed in such a way as to enable and facilitate these effects in the first place. In the case of the Chinese farmers, this first condition is given by the geological and hydrographic structure of the landscape they sustain themselves with. However, Sartre's use of the term *disposition* also implies that some forms of actualization through action are required.

This leads to the second condition, according to which "human *praxis* has to become a fatality and to be absorbed by inertia, taking *both* the strictness of physical causation *and* the obstinate precision of human labour" (Sartre 1978, 163, emphasis in original). Here, Sartre refers to instances in which the overall structure of practical ensembles necessitates individuals to attain their ends in prefabricated and limited ways (see sections 4.3 and 4.5). In Sartre's example, this condition is given by the farmer's mode of production and how the tools they use necessitate these farmers to cut down trees to prepare the soil for agriculture. He states that "[i]n the most adequate and satisfactory tool, there is a hidden violence which is the reverse of its docility. Its inertia always allows it to 'serve some other purpose', or rather, it *already* serves some other purpose; and that is how it creates a new system" (Sartre 1978, 183, emphasis in original). This means that on a relatively small scale over long periods of time, these farmers' activities may not pose a problem for the farmers themselves nor for the landscape they deforest. This might be because the farmers deforest sustainably, or the ecosystem can counteract deforestation by adapting over time. However, through their mode of production that is manifested in these farmers' tools and practices, they fulfill one condition for counter-finalities to arise.

The bare fact that historically situated individuals must attain their ends by modifying surrounding materiality that is disposed to give rise to counter-finalities is not enough. According to Sartre, this specific form of activity "must be carried on *elsewhere*" (Sartre 1978, 163, emphasis in original). This is the third and final condition. It refers to the fact that many activities, whose effects and side effects could be dealt with on a smaller scale, accumulate through "serial ubiquity" (Turner 2014, 41). In Sartre's example, this last condition is given by the fact that not only single farmers but a larger collective recognizes the strategy of cutting trees for soil to be initially beneficial for satisfying their specific desires. They begin to repeat this strategy and thus cultivate a certain *hexis* that both stabilizes the inner workings of their practical ensemble and enables it to persist through these repeated actions. In so doing, these farmers eventually rid their land of any natural boundaries that might prevent the flooding of their fields.

When flooding occurs through the geological and hydrographic structure—the material disposition—of the landscape, this flooding represents a counter-finality for these farmers. The very strategies they intentionally employed to respond to their needs and desires—in the sense of finalities—caused effects that eventually counteracted these strategies. Consequently, the practical ensemble these farmers constitute, together with their landscape based on a specific mode of production, is put into a state of exigency that necessitates action to be transformed—or else the ensemble itself might disintegrate.

This ensemble-wide state of exigency can be called a *crisis*. Koselleck et al. (1982) reconstruct the Greek origins of this concept and highlight both its revelatory and compulsive aspects. In its wider connotation, a *crisis* was a separating, distinguishing, or deciding between things. Accordingly, a *crisis* represents a crucial moment in the course of processes, such as the operations of systems, the course of surgeries and diseases, and the totalization of practical ensembles. At this moment, certain elements and structures are revealed to be substantial or *critical* for those processes. Furthermore, crisis illustrates the potential necessity for intervention so as to avoid disruption and/or collapse.

In Sartre's example, the farmland represents the central structure of equipment around which the practical ensemble of the farmers is organized. As such, it represents these farmers' *interest* (see section 4.3). In the critical moment of flooding, the farmland itself is revealed as a vulnerability of the practical ensemble. In infrastructure research, the concept of *vulnerability* is used to determine potential flaws or weaknesses of systems (Eifert et al. 2018, 21). Egan (2007) links critical moments of systems to their vulnerabilities or weak spots (J.I. Engels 2018b, 45–46). In Sartre's example, the farmland can be understood as the critical agricultural infrastructure around which an ensemble's overall form of organization is built. The structural integrity of the farmland is thus associated with the structural integrity of the very form of organization that enables these farmers to satisfy their needs and desires. A

threat to the farmland represents a threat to the ensemble and, concomitantly, to the existence of the farmers situated in this ensemble. Through flooding as a counter-finality, the very practices the farmer's ensemble consists of are in danger. This gives rise to concrete needs and exigencies for transforming how their practical ensemble is structured. That, or the ensemble collapses. This is further discussed in section 5.4 with regard to the critical significance of urban mobility infrastructures for the flow of traffic.

Objective Contradictions

How Sartre describes counter-finalities along with the three conditions he mentions almost suggests a somewhat environmentalist warning about the larger effects of humanity's intervention in their physicochemical surroundings (Ally 2017, 419). Similar processes to Sartre's counter-finalities can indeed be found in the negative consequences resulting from the rectification of rivers (Blackbourn 2006, 104–119; Bernhard 2016, 506–507)[19] or from anthropogenic climate change attributable to high CO_2 emissions, among other factors (see section 5.2). Sartre even mentions that the air pollution produced during the Industrial Revolution might represent a potential counter-finality for employers, as they are not able to avoid breathing such polluted air and thus suffer from how their actions act back on them through a larger material complex (Sartre 1978, 194). Sartre claims that the existence of counter-finalities makes it possible to identify what he refers to as *objective contradictions* in the interrelations between differently structured ensembles.

As mentioned in section 4.4, Sartre's practical ensemble framework allows one to both understand practical constellations in two ways. Such constellations can be understood regarding the overall function as a result of the interrelations of their elements or regarding these interrelations themselves. In the latter case, these elements, as partial totalities, promote this overall processing through their practical relations. These interrelations can be further scrutinized regarding their various modes of structuring. According to Sartre, the interrelations of practical constellations, such as political parties, the working class, or even individuals at a bus stop, are characterized by the needs and desires of the human elements these ensembles consist of. Such interrelations between constellations can thus be understood in two ways. One way is to focus on the individual elements or partial totalities and their interrelations. Doing so might reveal these interrelations to be clashes of interest between human beings. These clashes represent contradictions that demand solutions. The atomized people at a bus stop, for instance, all initially compete with each other for a seat on the bus. Focusing on these human elements may reveal that their needs and desires initially conflict with and contradict each other. The same can be

19 Much appreciation to Nadja Thiessen for these insights.

said for a political debate between two parties, considered as more structured constellations.

Another way to understand these conflicts and contradictions is to conceive them as structural moments of a larger totalization. In the case of the bus stop (see section 4.3), the needs and desires of all human elements can be satisfied when everyone gets a seat on the bus. Because of the larger totalizing process at the bus stop, the initial contradictions between individuals appear not to be contradictions at all, as they are sublated through the service provision of the bus. In the case of a political debate between parties, no resolution may be found. However, in the long run, the debate might be revealed to initiate a transformation in the debating culture of the larger political complex. As such, the debate represents a structural moment in the overall totalization of the political complex as a practical ensemble. This understanding of how the interrelations between elements mediate each other at different levels, and how they can be understood either as interrelations themselves or as structural moments in larger processes, is one of the biggest advantages of Sartre's practical ensemble framework. All of these contradictions have a materially objective foundation in the corporeality of each individual as a *praxis*-process (see section 2.4), and in the sociocultural and material conditions, they are situated in. But the contradictions still result from a clash of two interests that initially cannot be reconciled.

With the idea of counter-finalities, Sartre introduces the possibility of contradictions between human elements or constellations and inert matter. Such contradictions are not the result of two conflicting parties, because worked matter "produces a necessity for change *of itself*" (Sartre 1978, 183, emphasis in original). Sartre states that

> at the level of technical ensembles of the *activity/inertia* type, contradiction is the counter-finality which develops within an ensemble, insofar as it opposes the process which produces it and insofar as it is experienced as negated exigency and as the negation of an exigency by the totalised ensemble of practico-inert Beings in the field. (Sartre 1978, 193, emphasis in original)

Again, whether such contradictions are predominantly understood and analyzed as contradictions between elements or as structural moments of a larger totalizing process, different conclusions can be drawn about the historicity of these processes and the exact intricacies of finalities and counter-finalities. A counter-finality can, for instance, be understood as benefiting some while disadvantaging others. Sartre mentions that the over-industrialization of a country, for instance, might represent a counter-finality for rural classes, as these classes "become proletarianised to precisely the extent that is is [*sic*] a finality for the richest landowners because it enables them to increase their own productivity" (Sartre 1978, 193). However, in the larger totalizing process of the nation-state, understood as a practical ensemble, over-in-

dustrialization might itself become a counter-finality "as the country is now further away from its new rural bases" (Sartre 1978, 193).

With this conception, Sartre somewhat weakens the strict focus on materiality in relation to counter-finalities. In the rest of *Critique*, he uses the concept of counter-finality rather liberally to refer to instances in which the finalities and effects of one practical ensemble negatively affect another practical ensemble or material sector, and then eventually itself. This is because of his processual understanding of practical ensembles. Although any objective contradictions might result from inert material processes, they are all fundamentally attributable to human actions.

Totalization-of-Envelopment

The specific way in which Sartre frames the interrelations between practical ensembles is attributable to his larger conception of history. Section 1.3 mentioned Sartre's attempt to understand history according to his regressive-progressive method. His method essentially represents a de-reconstruction of the formation of historical situations. Section 1.4 outlined Sartre's claim that these situations must be understood as moments in transformative processes that only become dialectically intelligible as such from the inside, based on human action and experience. Sartre's theory of practical ensembles mirrors this understanding.

Any constellation, whether an individual in relation to the world, a family, a city, or a nation-state, represents both a totalization in and of itself and a partial totality that interplays with other partial totalities and thus contributes to larger totalizations. Through the practical ensemble framework, any of these totalizations can become intelligible based on *praxis*-processes directed to sublate the lacks and contradictions of human existence. However, in the course of any of these totalizations, structural moments can be identified in which objective contradictions necessitate human actions, without there being an individual subject or larger grouping that can be held accountable for those contradictions. Of course, individual and suprainindividual responses to these contradictions can themselves be understood as contradictions or structural moments in larger totalizations. Eventually, after many iterations, history itself becomes intelligible as what Sartre calls a *totalization-of-envelopment* that incarnates the individual and ultimately progresses through itself without a totalizer (Sartre 1991). Many Sartre scholars, such as Flynn (1997) and Catalano (2007), have analyzed and criticized this understanding of history; it is not the objective of this work to provide a satisfying answer to this debate.

Anyway, Sartre's conception of historical totalizations allows for a nuanced understanding of the role of the individual in larger processes. Human existence is indeed situated within historical constellations, which necessitate certain actions while delimiting other options. Nevertheless, human beings are simultaneously free from these constellations, as it is their action that ultimately drives their transfor-

mation. Although human beings might not necessarily control their *mobiles* or *motifs*, their actions fundamentally represent an expression of their ontological freedom. In this regard, every action is a fundamentally free endeavor, even despite the fact that it represents a re-actualization of the situation within a practical constellation (see section 2.3). Ultimately, this means that human existence is intrinsically meaningful—not only in a general way but also on a concrete, individual level. It is precisely the actions of individuals, despite being inherently situated, prefabricated, and constrained through inert matter, that constitute meaning and historical momentum, whether intentional or not. Sartre incorporates both the dynamics of human existence and action as well as the forces of technology into a single endeavor to which human beings are subject. This view brings him close to Heidegger's ideas about the *Seins-Geschick* (Heidegger 2000) and to the role of human elements in *technospheres*, i.e. complex autonomous systems of human and non-human elements in the Anthropocene (Haff 2014; Heßler 2019).

One of the advantages of Sartre's theory of practical ensembles is that it allows one to understand any constellation between human and non-human elements in terms of their interrelations. The examples in this chapter exemplify this. In an abstract way, the general relation between individuals and their concrete material conditions can be understood as a practical ensemble. Such an understanding discloses the inherent structures of need, desire, and scarcity of which the ensemble consists. In a more concrete way, this understanding can reveal the various ways in which human action is mediated through material things and structures.

4.7 Concluding Remarks

This chapter has shown how Sartre's thoughts on totalizing action and the relationship between human existence and technology interconnect in his larger theoretical conception of practical ensembles. From relatively simple practical interrelations between human beings and their surrounding materiality, both in the form of other humans, non-human entities, and even structured patterns of sociocultural meaning within a scarce milieu, complex processes of formation and reinforcement, transformation, persistence, crisis, and even disruption may ensue.

With his thoughts on the formation of serially structured ensembles and the cultivation of *hexeis* as action dispositions, Sartre captures processes in which forms of societal organization ossify in matter and, at the same time, produce the necessary scaffolding for the efficient and effective satisfaction of requirements, wants, and wishes.

Sartre's thoughts on the transformation of serially structured ensembles into communally structured ensembles, and his conception of counter-finalities, outline both human and material processes. Through them, human beings are liberated

from and even robbed of the socioculturally organized, structured, and undoubtedly necessary foundations for satisfying their requirements, wants, and wishes.

All these processes must in turn be considered in a larger dialectical interplay based on totalizing action, and thus through the perspective of human needs and desires. On the one hand, humanity's structured actions and strategies to tackle their material and immaterial requirements, wants, and wishes drive the combination of technology and *hexeis* that enacts the abovementioned system effects. On the other, human action, both in its active and passive, practico-inert form, stabilizes and secures the systematic provision of the required, wanted, and wished-for goods and services in the long run. Human needfulness and the inability to tackle it in a scarce milieu thus represent the abstract, fundamental basis for all concrete forms of societal organization. The structured interrelations between human and non-human elements in practical ensembles are therefore fundamentally shaped by the needfulness of their human elements. Against Sartre's conception of the practico-inert, the structured interrelations in practical ensembles also express the inherent needfulness of historical human beings. This abstract needfulness is spatiomaterially concretized in certain processes and strategies. Through them, the requirements, wants, and wishes of the human elements are satisfied—both in the technological artifacts used in these processes and strategies, as well as in the *hexeis* through which the human elements adapt. Their adaptation is to the technological artifacts and the processes and strategies and occurs through repeated interaction and education over time. By highlighting the fundamental human needfulness at the heart of all sociocultural structures, Sartre's approach allows one to deconstruct the structures' totality and reconstruct their constitutive processes as active totalizations. These structures are thus disclosed as artifacts themselves, within the oscillation of human liberation and necessitation, based on the ontological freedom of human existence. Sartre summarizes this as followed:

> [T]he history of man is an adventure of nature, not only because man is a material organism with material needs, but also because worked matter, as an exteriorisation of interiority, produces man, who produces or uses this worked matter in so far as he is forced to re-interiorise the exteriority of his product, in the totalising movement of the multiplicity which totalises it. The *external* unification of the inert, whether by the seal or by law, and the introduction of inertia at the heart of *praxis* both result, as we have seen, in producing necessity as a strict determination at the heart of human relations. And the totalisation which controls me, in so far as I discover it within my free lived totalisation, only takes the form of necessity for two fundamental reasons: first, the totalisation which totalises me has to make use of the mediation of inert products of labour; second, a practical multiplicity must *always* confront its own external inertia, that is to say, its character as a discrete quantity. (Sartre 1978, 71–72, emphasis in original)

La force des choses, the power of things and circumstances in practical ensembles, arises from the fact that the abstract structures of human need are socialized and given shape in concrete, socioculturally mediated structures of desire. This shaping also occurs in the technological processes and artifacts that manifest the satisfaction of these desires as potential means to thusly manifested ends. However, *la force des choses* arises only because there exists the ontological freedom of human beings as the abstract condition for the determination of oneself by and for oneself, through concrete action, in dialectical interrelation with concrete materiality. Needfulness, both in the abstract structure of human existence and in the concrete structures of forms of societal organization, expresses the dialectical tension of liberation and the necessitation of human history.

The perspective on this dialectical understanding of needfulness allows one to disclose forms of societal organization as entangled simultaneities of mutually mediating fields of possibility. This understanding considers practical constellations to be enacted through goal-directed human actions. It also deconstructs every form of organization and reveals structured interrelations at multiple levels, while emphasizing that this form of organization can itself be reconstructed through these interlocking levels of interrelation.

Sections 4.4 and 4.6 mentioned that practical ensembles can be understood either by their overall totalizing processing or by the interrelations of their elements at different levels. According to the praxeological, dialectical, and de-reconstructive nature of Sartre's approach, human constellations are revealed as graduated interrelations that structure, inform, and mediate each other. All of these interrelations have their basis in human action. Owing to its inherent historicity, the practical ensemble framework presupposes a certain bottom-up modality in terms of how enabling and constraining processes interlock and may become intelligible through each other in human constellations. A top-down modality can be identified in terms of how larger forms of organization represent enabling factors of the structures those forms consist of. To better grasp this layered modality, a multilevel conception is used to refer to interrelations at the micro-, meso-, and macro-levels.

The micro-level represents the goal-oriented, totalizing interrelations between human and non-human elements. Depending on the nature of the constellations in question, the exact status of these interrelations might differ, but all are understood to be serially or communally structured so as to enable the satisfaction of human requirements, wants, and wishes. Furthermore, these interrelations are understood as mediated by practico-inert objects and structures. Eventually, this reveals more complex modes of structuring that mediate human actions in different ways. Depending on the granularity, the meso-level either represents the actual individual agents or, when considering larger systemic connections, practical ensembles. When individuals are perceived on the meso-level, the individual significance of practical interrelations is scrutinized with regard to an individual's existence as

a *praxis*-process. When the practical ensembles are perceived on the meso-level, the modes of structuring of the practical interrelations that comprise the structures of the practical ensemble as a totalizing process are scrutinized. On the meso-level, individuals or ensembles represent partial totalities that totalize and are enveloped in the totalization of a practical ensemble on the macro-level. Based on this understanding, structured interrelations between several partial totalities can be identified, and these further mediate the interrelations on the micro-level and contribute to the macro-level processing of the constellations in question. Lastly, the macro-level represents overall forms of practical ensembles and even history as a practical ensemble itself. In these ensembles, the interrelations between partial totalities can be understood as structural moments of an overall totalizing process that again affects interrelations on the meso- and micro-level.

Based on this deconstruction of practical constellations, the interlocking levels of totalizing interrelations can be reconstructed in more abstract or concrete ways. A more abstract form of reconstruction is to outline how these interrelations themselves mediate each other. A more concrete form of reconstruction is to scrutinize individual interrelations between human and non-human elements in terms of how these interrelations mediate human action in various ways. This reconstruction can take place by focusing on either how instrumental means enable people to realize their intended ends, or how human-technology relations mediate other planes of human reality.

In section 4.5, it was shown that Sartre's practical ensemble framework also illustrates the significance of practical inertia, both in the form of practico-inert objects and structures and of human *hexeis*. The practical inertia of objects and structures plays a central role in all the processes involved in the totalization of practical ensembles. Emphasizing the role of material inertia in these processes allows for a closer, more nuanced assessment of path dependencies, practical constraints, and spaces of possibility. The same is true for bodily inertia. The analysis has shown that *hexis* does not just play a significant role in the persisting of practical constellations. It also accounts for the fact that human beings naturalize their form of organization and thus conceive it to be the normative default mode for how their interrelations are structured per se. Scrutinizing the role of *hexis* reveals the practical inertia of human elements and also shows potential ways to transform the supposedly ineluctable structures of human reality.

Furthermore, the practical ensemble framework allows one to conceive of potential contradictions and conflicts of interest between the elements of ensembles as conflicting finalities at different levels of analysis (see section 4.6). The forms of conflict may or may not represent actual conflicts when seen against the background of higher-level totalizations. This allows retracing the clashes between elements as potential drivers or disturbances on the micro-level, which may grow into driving forces or disruptions for the larger totalizing processing on the macro-level. In going

beyond the internal effects of the totalizing processing of practical constellations, potential counter-finalities can be identified. These may act back on the constellations' structure, thus putting them into crisis.

To give this needfulness and the multilevel modality of practical ensembles a more concrete shape, and to ground the significance of Sartre's thoughts on practical ensembles in the contemporary challenges of the human condition, the next chapter explores how the theory can be applied to urban mobility systems in *praxis*.