3 Contemporary social evolution and social evolutionary theories

3.1 Social evolution and theories of society

As demonstrated in the previous section, evolution is firmly ensconced in modern social theory, and particularly in what could be termed 'comprehensive' social theories that seek to provide accounts of the entirety of the social world. In fact, no serious comprehensive social theory does not share the view that, in one way or another, 'society is the outcome of evolution' (Luhmann 2012: 251). This is why 'since Marx, Spencer and Durkheim, the theory of society has been a theory of social evolution' (Brunkhorst 2014: 1), a dynamic that became even more explicit with twentieth-century social theorists such as Luhmann, Elias and Habermas. But there are also less obvious candidates, and here we draw on Foucault's post-Darwinian rejection of Lamarckian evolutionism and its replacement with a non-linear analysis of society that highlights the 'hierarchical complexity' (Commons and Ross 2008) of genealogical layers that engender society's discursive fundamentals – in other words, the evolution of 'regimes of truth' and '*épistèmes*'. We suggest that there is a broad overlap and a (dialectical) complementarity not only with regard to systems theory, critical theory and poststructuralism, but also – and this is specific to social sciences such as IR – between evolutionary theory, genealogy, and social/interregional/global history, which cannot be completely separated from each other for both

substantive and heuristic reasons.[1] While the social evolutionary components in Luhmann's work are obvious from the outset and his *Theory of Society* (2012) devotes an entire section to social evolutionary theory, orthodox perspectives on Habermas and Foucault tend to underestimate the degree to which evolutionary thinking shaped their work. Based on a burgeoning literature that moves beyond this, and from which we draw, we suggest that a thorough engagement with Foucault and Habermas brings to the fore not only strong influences from social evolutionary theory, but also reveals a range of complementarities with Luhmann. Without aiming to artificially merge these otherwise quite diverse theories, we suggest that a conjoined reading is warranted. It would enable us to draw on a growing literature that highlights epistemological and ontological overlaps between them (Kneer 1996; Stäheli 2000; Åkerstrøm Andersen 2003; Borch 2005), thereby challenging those – in our view outdated – perspectives that tend to replicate arguments about an alleged fundamental incommensurability.

Habermas's œuvre in particular, beginning with his Ph.D. thesis (Habermas 1954), is closely related to evolutionary theory. In his early work Habermas developed a strictly post-metaphysical and anti-teleological philosophy of history (Habermas 1963), which was closely related to the evolutionary theory of the 1950s. One of the basic ideas was that theory and its practical and critical intentions, as well as its epistemic implications, are part of the same evolutionary processes that the theory analyses (Habermas 1968). After the linguistic turn, Habermas combined the ontogenesis of cognitive and moral competencies with a functional theory of evolutionary adaptation (Habermas 1976, 1981a, 2004). Finally, he also constructed his theory of law on the evolution of the functionally differentiated system of positive law (Habermas 1992; Luhmann 2004). Moreover, overcoming the animosities between Habermasian and Luhmannian camps that existed in the past, more recent literature highlights a number of epistemological and structural similarities between these two

1 A very good example for such 'complementarity work' would be Chris Thornhill's new sociology of (international and global) constitutions (see, for example, Thornhill 2014, 2020, 2021).

approaches, including the recourse both have to the notion of social evolution. The linguistic turn made visible the centrality of language and communication that has driven human evolution ever since the central role of chatting during the pre-Axial Age.

Thus, on the methodological level, a new approach to critical systems theory is evolving that is a Habermas-Luhmann hybrid, in particular with respect to legal theory (Amstutz and Fischer-Lescano 2013; Möller and Siri 2016; Schecter 2019). From a critical point of view, the driving force of social evolution is an operation called negation (disagreement) – this is a theme central to Young Hegelians and critical theory as well as to systems theory and post-structuralism, thereby linking Foucault, Habermas and Luhmann. It also features strongly in our approach (see below). The accumulation of negations triggers algorithmic evolution (i.e. variation, selection, restabilization) as well as cognitive and normative learning processes. In one major variant, this echoes our focus below on communications as the central mechanism of evolution, where 'the Marxist dialectic of productive forces and relations of production is replaced by a dialectics of egalitarian [emancipatory] and repressive communication' (Möller 2021). In his *Critical Theory of Legal Revolutions: Evolutionary Perspectives*, Hauke Brunkhorst (2014) understands the evolution of law as the result of normatively motivated legal revolutions. Revolutions here are conceived as a kind of punctuational burst (Gould and Lewontin 1979). However, they do not appear out of nothing. They only occur within state-building in stratified class-societies (from 3500 BCE onward) and in functionally differentiated class-societies (from 1000 CE onward), and they do so under two conditions: (a) the existence of long-term cognitive, social and moral learning processes, due to religious rationalization, highly contested philosophical and religious discourses, structural conflicts and class-struggles; (b) the existence of a technically advanced legal order especially for the coordination of the material interests of imperial ruling classes. The learning process terminates in the cognitive and normative insight that social structure is not a natural destiny but can be changed through emancipatory or repressive po-

litical action.[2] Under the 'favourable' conditions of a serious crisis of legitimization of established orders, this combination of normative learning and preadaptive functional advances culminates in legal revolutions. Their achievement is the constructive invention and reinvention of a growing and ever more egalitarian, functionally differentiated legal system – later defined normatively as 'law that is freedom' (Kant), and defined functionally as the 'immune system' of society (Luhmann 1995, 2004). The new, revolutionary modern law, including international law, reflects the insight that the structure of human societies can be changed by the 'practical-critical activity' of cooperating actors (Koskenniemi 2001). However, modern law is tricky, paradoxical (Luhmann, Derrida, Teubner) and dialectical (Marx, Adorno, Habermas). It enables an enduring emancipatory praxis and stabilizes progressive advances (see also Kratochwil 2019), yet it also undergirds unprecedented formations of class-rule and international hierarchies, as well as (class-, gender- or race-based) oppression and exploitation. Therefore, with the emergence of modern society, law became a kind of pacemaker for social evolution (Luhmann 2004), for better or worse, and with no teleology that goes beyond the fragile plans and expectations of social actors and agencies, and other 'epigenetic' constructions (Möller 2021).

As far as Foucault is concerned, it would seem too simplistic to conclude that his was not an evolutionary theory from the fact that 'evolution' is not listed in the index of his collected works (see Foucault 1994: 867). Thus, his genealogical method is directly focused on the triad variation, selection and restabilization. In Foucauldian terms, one begins the investigation by identifying a given discourse (or episteme, or dispositive, Foucault conceived of the selective

2 As discussed extensively in the previous chapter, we agree with a recent turn in anthropology that suggests that there is every reason to assume that pre-civilization (a.k.a. hunter-gatherer) societies were as much based on experiments with social structure, cognitive learning and a sense of the contingency (and therefore the possibility of change) in social order as the script-based societies with which this is usually associated. We leave open the question about traces of proto-social-evolution theorizing in such societies, focusing in this book on modern social evolutionary theory.

element in different ways throughout his career), only then to jump back to a point before that discourse stabilized, in order to capture its beginning that caused a discursive break (variation), which caused the new discourse and its effects to prevail (restabilization). Given the unconventionality of claiming Foucault as an evolutionary thinker, all these three steps need to be unpacked with a view to highlighting their evolutionary character.

Firstly, stabilization. The entire and consistent thrust behind Foucault's œuvre was an attack on approaches to social analysis that highlighted stability and invariance. Attacks on functionalism and positivism are cases in point, but the basis of his work was an attack on structuralism. The structures that gave structuralism its name, whether linguistic, mythical or, more specifically, embodied in social forms, were famously posited as ahistorical. In the mature formulation of Lévi-Strauss, the job of the analyst was to identify, analyse and compare what he called manifest or observable structures, for example, cooking and gendered division of labour, in order to identify the underlying latent and unobservable structure (Lévi-Strauss ([1953] 1993). Foucault and others who came to be known as post-structural thinkers earned that moniker simply by asking 'What if there are no latent structures?' This is an evolutionary question: it highlights how things do not stand still, but are forever changing, which means that we have to turn away from explaining stability, which is an ephemeral phenomenon, towards studying variation.

Secondly, variation. Manifest structures, ephemeral as they may be, are socially real, which means that there is a social mechanism of some kind that holds them in place. If this is not a latent structure, then what is it? It was to answer this question that Foucault introduced first the term 'episteme', then 'discourse', and then 'dispositive'. The idea was to come up with a conceptualization of the social that was not entirely static, but did explain how so much social energy goes into keeping things as they are. Discourses stay the same largely due to the power/knowledge nexus. Power is productive of social life and is usually a stabilizing force. However, it is also inherent in the social that relations between humans and things change, which means that things that were not problematic before (e.g. a certain form of hierarchy, a certain form of violence), now become so.

New questions spell new variation in the discourse, which, if the invariance-breaking force is strong enough, spells change. Foucault's best-known works detail how this happened, dealing first with how we think about atypical mental states and then with sexuality.

Thirdly, restabilization. Foucault consistently underlined how restabilization should be thought of not primarily in moral terms, as emancipation, but in analytical terms, as how specific practices are inscribed in the social, as well as in each individual, by specific forms of power (as a contest of wills, as discipline, as governmentality; Neumann and Sending 2010). The *locus classicus* is the opening pages of his *Discipline and Punish* (Foucault [1975] 2020), where a description of a man being tortured during one century gives way to a description of how inmates are disciplined in the following century. The obvious thrust of both practices is to restabilize the discourses of power of which they are constitutive parts, with one discourse (of surveillance) having evolved to take the place of another (of punishment).

The theoretical similarities between Foucault and Luhmann (see Stäheli 2000) have been highlighted and built upon especially by the Luhmannian Copenhagen School (the *locus classicus* being Åkerstrøm Andersen 2003), but also feature strongly in works that highlight the similarities between the Foucauldian and Luhmannian conceptions of power and the role of power in shaping (the evolution of) society (Stäheli 2000; Borch 2005).

These diverse bodies of theory from Foucault, Habermas and Luhmann seem to be converging around two paradigmatic pillars: first, a constructivist logic that highlights the centrality of a sequencing of communications (or discourse) as the central mechanism of social evolution; second, an interest in the systemic effects of social evolution on society, with a particular focus on complexity. The formal sequencing of communications challenges an analogy that equates natural with social evolution. If one were to apply such an analogy, what evolved in society as its basic units, and what triggered evolution, would be actors (for example humans, states, non-state

organizations, or other units, such as civilizations).[3] Consequently, such approaches employ an analogy between actors in the social world and what Dawkins (1976) calls 'selfish genes' in the natural world. In such a perspective, actors are regarded as the 'masters' of social evolution. In our view, this dramatically overestimates the ability of humans, states or other actors to control causes and effects in social evolution. And it dramatically ignores the fact that the very actorhood of these units, as Meyer and Jepperson (2000) explain, is itself a social construction, that is, a contingent outcome of social evolution rather than its origin. Enquiring about society's basic units – or those of world politics such as states – thus requires, in the first place, challenging views of actorhood prevalent in the fundamental equating of genes and actors. Serious social theory is urgently needed precisely for that purpose when talking about *social* evolution.

Against this background it is not surprising that those theories of social evolution that are not mere transpositions of theories of natural evolution have recourse to a constructivist logic, because the constructivist framework addresses 'communication all the way down' (Albert et al. 2008; Luhmann 1995). This basic assumption is shared by Foucault, Habermas and Luhmann. It suggests that society's basic unit, and in fact the foundation of all social order, is communication – or, in the case of Foucault, discourse as the condition of communication. As in Habermas, since the Second Axial Age – that is, since the emergence of politically centred imperial class societies based on agriculture and handwritten papers – we can trace in written sources and elsewhere that discourses are the ever-fluid source of variation and the spontaneous production of contingent power–knowledge complexes. The key question to ask from the perspective of a theory of evolution, then, is how specific communications (and discourses) emerge, stabilize or disappear. What is of key interest are not single instances of communication (a

3 Note that there are theoretical biologists who study human societies without drawing on such an analogy; evolutionary transition scholars (e.g. Maynard Smith and Szathmány 1995; Bouchard and Huneman 2013) would be a case in point. See also Wendt 1999: 321.

word uttered, a sigh, a rolling eye), but the clustering of communications into complex social forms as 'carriers' of social evolution, such as discourses, practices, memes, institutions, norms, semantics, structures and forms of actorhood.[4] Societal order is, therefore, not only 'the outcome of evolution' (Luhmann 2012: 251), it is, at the same time, evolution's always pre-existing boundary condition. It is the permanent 'cultural evolution of pronounceable memes, words, leading the way' (Dennett 2017: 220). This is why we always speak of *re*stabilization instead of mere 'stabilization' (Luhmann 2012). A constructivist logic of social evolution traces how order as an emergent and contingent phenomenon evolves on the basis of countless interconnected communications. In other words, structures are communications. On the one hand, this requires us to ask how communications cluster into family 'tree[s] of derivation of a discourse' (Foucault 1972: 147) that generate forms of societal differentiation and normative constraints. On the other hand, the question is how structures emerge not only out of shared understandings of reality but also out of contestations. This position seems to be backed strongly by the epigenetic turn in biological evolutionary theory that became ever more prominent during the last decade (Jablonka and Lamb 2010, 2014: 373–424; Carey 2012; Moore 2015; Rosenfield and Ziff 2018).

This fundamentally constructivist analysis of 'society as communication', with an endless sequence of communications creating, changing and often being their own boundary conditions of possibility, defies a view of the social world in terms of an ontological distinction between separate 'levels'. Whenever such levels are distinguished – one might think here of the distinction between micro and macro levels, between agency and structure (Wendt 1999)

4 The concept of memes can be found in Daniel C. Dennett's theory of cultural evolution. As Dennett (2017: 176) notes, what he terms 'cultural evolution' is different from natural evolution in that what evolves are not genes or actors perceived as species but, to play on Dawkins, 'selfish words' (Dennett 2017: 189) that 'evolve by differential replication' and 'cluster in larger meme complexes'; these meme complexes can be conceived as 'the least unit of sociocultural information' (Wilkins 2008: 1647).

or between international and domestic systems – they should be viewed not as ontological distinctions but as operative markers of communication, that nevertheless allow analytical references to be made to empirical instances where they are treated (e.g. by political actors or IR scholars) as substantive levels. In that capacity they can serve as a useful bridge between communication-based approaches that link them with, for example, the distinction between interaction, organization and society (Luhmann 1995), or materiality-based approaches highlighting the 'nexus' of situations (Hirschauer 2014).

Having situated our study in relation to a broader paradigmatic tradition that builds on modern social theory but has deep roots in proto-social evolutionary thinking across the ages (see Chapter 2 above), we will now elaborate in greater detail on the role of communication in accounting for the formal logic of social evolution. Drawing on Luhmann (2012) we focus on the sequencing of communication as a threefold (discursive and cognitive) process involving the variation, selection and restabilization of single communication 'units' that cluster in discourses and (as in Dennett 2017) meme complexes. This also relates to the structural coupling of social evolution with cognitive evolution, again highlighting overlaps between Luhmann and Habermas, especially regarding the starting point of negation mentioned above. As Luhmann (1997: 461; see Wimmer 1996: 115) explains, 'all variation … is contradiction as disagreement, hence, not in the logical meaning of contradiction but in the originally dialogical meaning'. Similarly, Habermas (1981b: 445–52) states that 'dialectic is resistance in relations of domination [..., that] *is* saying no'. That is why we find social evolution in human, communication-societies, as societies of 'dialogical encounters' (Graeber and Wengrow 2021: 47) out of which, for example, social experiments like building cities originally emerged.

The objective and hence (at least as a whole) uncontrollable process of social variation, selection and restabilization is always already accompanied by a process of permanent cognitive rationalization and rational learning among social groups and communities of practice, trying to increase their capacity to control and stabilize their worldviews and determine their life, as well as their private, public and political autonomy. This learning – and we agree here

with Emanuel Adler (2019) – can be seen as normative evolution, defined as the structural coupling between human consciousness and (communication-based) social systems.[5] This also figures in Elias's (1976) and Linklater's (2016) accounts of increasing civilization, understood as the regulation of the articulation of affections through social institutions, in particular through monopolizing violence.

Evolutionary learning is the result of internal cognitive reasoning and the emergence of new ideas and, if successful, leads to the establishment of new 'normative constraints' (Brunkhorst 2014) which do not steer the evolution towards a final destination (*telos*) but commit the social actors and agencies for some (unforeseeable) time to a certain evolutionary direction with a certain variety of included and excluded possibilities of variation and selection (change). Such learning processes often consist in overcoming the paradigmatic blindness of a certain master image. As the eminent historian Peter Brown has shown, and as we have highlighted above, throughout the Roman Empire the master image of the city and the citizen blanked out the relevance and even the existence of the majority of non-citizens, living either in the city as a huge and ever-changing number of migrants or in the rural environment and making up the vast majority of the Roman population. However, after the fourth and fifth centuries CE the intensified Near Eastern discourse of Jews and Christians on the biblical image of the poor challenged, and finally replaced, the classical master-image of cities and citizens. The learning consisted in overcoming the cognitive and normative blindness of the classical master image because Christian bishops in particular conceived the naked poor literally: as universal figures but stripped of all wealth once confronted with God's judgment. Therefore, the new master image for the first time cognitively covered the totality of Eastern Roman imperial society and its entire population (except the slaves). Moreover, it no longer represented the poor in *normative terms* as passive beggars, but for the first time as the active plaintiffs accusing the rich and the structure of the entire class society – factually including the major side-effect of the rise of

5 On the structural coupling of politics and other systems see Luhmann 2000: 372–74.

the bishops to imperial power (Brown 2002). Thus, such learning by societies can be described as real cognitive and normative progress of knowledge in Habermas's sense (from particular to total, from affirmation to critique of class structure) and as a real change in the power structure through a power-knowledge discourse in Foucault's sense. Moreover, while the new master image includes preadaptive advances in mass action (from beggar to plaintiff) that later can be used for revolutionary change – as during the great (papal) legal revolution or the English, French, Haitian and American political revolutions – or for a further *restabilization* of class-rule etc. (often as the outcome of 'failed' revolutions).

With a view to variation, then, social evolutionary theory is primarily – in addition to learning and the emergence of creative innovations – about the importance of contestations or 'negation' (Luhmann 1995: 357–404; Brunkhorst 2014). This is the fundamental *social* underpinning of change. More precisely, it is about the always existing possibility of contestation of communications in human society, understood as the communication of a 'no' (Stetter 2014). It also is about new communicative ideas that challenge entrenched ways of doing things. A 'no' – which can also be a creative and apparently novel way of doing things and therefore does not necessarily need to be a contestation of the confrontational type (i.e. clearly communicating such a 'no') – marks a disturbance of entrenched societal practices. Contestations thus understood go directly to the heart of the main problem that social evolution has to overcome in order to generate societal complexity and trigger evolution, namely how to deal with so-called double contingency in communication (Luhmann 1995: 103). Double contingency entails the impossibility of generating shared meaning, in the sense of complete mutual understanding. Social communication always has to mediate the problem of the inaccessibility of other people's minds and the impossibility of deciphering their 'real' intentions. Even in a social system with only two participants, how information is understood is contingent for both of them (hence 'double' contingency). Dealing with double contingency thus regularly leads to institutionalized forms of rendering the often unlikely acceptance of communication offers more likely – privileging the 'yes' on the basis of tradition,

norms, shared life-worlds or media of communication (such as power, money and law) – for otherwise a temporary fixation of social structures would be impossible, entailing the unpredictability of *any* social arrangement and thus impairing individuals' need to make sense of the world (Luhmann 2012: 190–99). If the likelihood of communicative negations (or innovations) and therefore of variations in society is kept at bay, for example by tradition, and if the spatial spread of communications is contained reducing cross-polity contacts across large distances and cultures, social evolution can be expected to proceed at a slower pace. The Neolithic revolution was not a watershed from that perspective. Even before that, hunter-gatherer societies maintained long-distance contacts and trans-societal institutions, thereby establishing webs of communications sustained by annual meetings, rituals and gift-giving – outbreeding too was a necessity in tribes that usually comprised only 20–200 people (reflected from an IR perspective in Buzan and Little 2000: 115–33). The allegedly incremental nature of change in hunter-gatherer bands (from our point of view, more of a conscious cognitive strategy to disenable stratification and permanent domination by a specific ruling class) is attributed also in IR literatures to a seemingly consensus-oriented and egalitarian set-up in segmentary human societies prior to the emergence of the first major cities around 3500 BCE, which saw the institutionalization of hierarchies and a mushrooming of contestations (primarily between leaders), as well as the restabilization of these contestations in the form of conflicts and new social structures, such as war, which can be read as the onset of an 'offensive realism world' (Tang 2013: 43; Buzan and Little 2000). Recent research in anthropology questions this romantic view of pre-Neolithic societies, and there is growing evidence that these societies were diverse internally and in relation to each other and experimented with many social forms, including hierarchies and inequalities. However, the emergence of script certainly made a change for it allowed novel forms of voicing communicative negations, for example during absence, while in the modern era other technological innovations such as the printing press, the telegraph and the internet continue that trend. Any widened pool of variations that can be uttered and experimented with goes hand in hand with

an increasing likelihood of contestations, for example in relation to challenging the political status quo (Luhmann 2000). That modern society observes itself as ever-changing further accelerates such dynamics, for it legitimizes changes to the status quo based, for example, on notions of 'progress' or, as Foucault highlights, due to the relative legitimacy 'resistance' enjoys in the context of modern (global) governmentality (Merlingen 2003; Jaeger 2014; Buzan and Lawson 2015). To be sure, similar dynamics can be discerned in earlier epochs too, as, for example, in the long history of nomad resistance until early modernity (Beckman 1999; Khazanov and Wink 2001). Throughout human history, new media of communication – such as language, scripture, the printing press, the telegraph, the internet, etc. – have undergirded the pools of variation in societal communications based on innovation or contestation. This has also intensified the pressure for a reduction of complexity, for example by establishing social institutions that challenge communications in a way that renders their acceptance more likely, but, as Habermas (1976) shows in his work, also underpins social evolution in terms of socio-cognitive learning, rational problem-solving, and rationalization as far as cognitive evolution is concerned (Weber 1978; the latter is known as 'creative variation' in Adler's terms; Adler 2019: 219).

Selections in social evolution can then be understood as a broader communicative project, which ensures that variations are not forgotten, in particular if they have triggered learning processes. Selection thus means that specific variations are picked up and remembered in future communications. In terms of a theory of evolution, selections can be understood as preadaptive advances that might (or might not) consolidate in new forms of social order. They are not yet about 'sorting' (Vrba and Gould 1986), the restabilization of contestations that condense into expectations about (legitimate) new structures and new societal orders. They are about making alternatives available in future communications and discourses. In other words, selections in social evolution relate to often irreversible, revolutionary changes in the discursive logic in both social struggles and more cooperative settings, such as within communities of practice. The new variations may be accepted or rejected, that is, referred to as positive or negative selections in

evolutionary theory. However, they can no longer be forgotten (as Kant had already noted with respect to the variations triggered by the French Revolution; Kant 1977: 361). In some cases, preadaptive advances function as a kind of counter-memory, such as when the memory of the fictive Exodus story of the Revolution of the Old World (Mediterranean/Middle Eastern Antiquity) was reactivated as counter-memory in all the great legal revolutions of the modern world (Assmann 2015; Berman 1985).

It appears, however, that while such selections are ubiquitous in the modern order, there is a growing difficulty in modern society with respect to restabilization – as regards both systemic restabilization and rational reconstruction on a cognitive level, an issue that is also central to Habermas (1976; Weber 1978; Horkheimer and Adorno 1972). Modern world society often experiences itself as constructed, oscillating between contradictory selections and experiments with constant variations, at the expense of restabilization (i.e. temporary stability). The semantic promise is one of preadaptive advances, that is, the promise of a future in which, in accordance with individual taste, a global community integrated by, say, human rights or the Caliphate, or a world of neatly separated civilizations – such as the Russian world – is about to become reality. That is why, as Luhmann (2012: 296) put it, modern society encounters so many problems in distinguishing between restabilization and mere variation. This is arguably a key reason why such semantic promises are often prone to the use of violence and force in order to take a short-cut to the new order (for example a democratic or Islamic Middle East, a Russian-dominated post-Soviet space, etc.), as illustrated by the 2003 Iraq war or the rise and fall of Da'esh ('Islamic State') or Russia's war on Ukraine (2014/22). Seen from that perspective, and without making judgments about the ubiquity of variations in older societies, contemporary world society is experimenting with 'more and more daring disadaptations' (Luhmann 2012: 269), so that its evolution is characterized by nervous selections rather than restabilizations of expectations. Because experimentalism (Dewey 1925) goes hand in hand with rationalization, experiments with disadaptations are used methodologically in reflexive reiterations (see Foucault 2003). This links the innovative character of variation with the risk of

daring social experiments, from eugenics to educational reforms, system crashes and legitimization crises that caution against equating systemic operations with order, functionalism and stability, let alone moral superiority.

3.2 Cognitive and normative evolution: Learning and unlearning

We need to reiterate at this point that the underlying distinction between social, cognitive and natural evolution does not pertain to the form of evolution (the sequence of variation, selection and restabilization) itself, but rather to the possible specifications of that form in three different contexts: the social world (social evolution), consciousness/mind systems (cognitive evolution), and biological or non-biological systems, such as the cosmos or tectonic plates (natural evolution). Each of these are characterized by fundamentally different constitutive elements and patterns which prohibit a simple copy and paste of the specifics of the form of evolution in one realm to another realm, although notable similarities exist (such as, for example, in relation to learning which is possible in both social and cognitive evolution, but different in each).[6] Moreover, despite the constitutive differences, they do not break with the continuum of evolution. There is some kind of internal connection between differently constituted evolutions in matter, organisms, societies and subjects.

'Being-in-the-world' (Heidegger 1993: §§ 12–18) connects the social with individually attributable, cognitive evolution (consciousness). When we think about drinking a beer, about who we are

6 In this respect, it makes little sense to argue about whether it is useful to 'apply' one kind of evolution to a specific realm, such as, most notably, 'world politics'. Usefulness in this case depends entirely on the understanding of how such a realm is constituted. If someone were to argue that world politics is not about communication or minds but about genes, then applying theories of natural evolution would make perfect sense – but it would also amount to saying that international politics resembles a violet or a sparrow.

and want to be or about evolutionary theory, in each case there is nothing meaningful, no knowledge in our head, in neverland or anywhere else. What is and occurs in our head can be observed from outside our consciousness and thinking (and with no participation from our consciousness at all). What the neuro-scientist observes is completely meaningless for the object of his or her observation: binary-coded neuronal storms. These storms can be observed only by high-tech scientists in a lab, and they have nothing to do with what we think about ourselves, about these storms and how we do that. Neuronal processes are self-referential but cannot think and reflect what they are doing, because thinking is acting (Kant 1968: §§ 15, 17), and acting is 'always already' acting in the world, which is a social 'lifeworld' following the path of the social evolution (Heidegger 1993: § 18; Husserl 1976: 111–113). Therefore, all acts of solitary thinking are speech acts. All we know, doubt or just think about is out there in the social world, and we are part of it, and so is thinking. Because: No thinking without thinking by using language, silently or aloud. There is no thought beyond present and moving human bodies (Strawson 1972). Abstract thought and theories exist frozen in artifacts, in libraries, on hard disks in space and time, but only in the state of latency (therefore Parsons rightly speaks of a latency system), whose conditions of manifestation are physically present readers.

Second, there is also a kind of internal relation between socio-cognitive evolution (or the coevolution of subject and society) on the one hand, and the natural evolution of organisms, observed by natural scientists and philosophers at least since the mid-eighteenth century. Around 1800 it seemed to become ever more evident, as in the speculative evolutionary philosophy of Friedrich W. J. Schelling, and especially in his *Weltalter* fragments of 1811 and 1813 (Schelling 1946), that everything spiritual is modified physical impulse. Urge (in German: *Drang*) is, according to Schelling's insight the pre-form of spirit ('*Vorform von Geist*')' – and spirit here should already be read in its Hegelian meaning of subjective, objective and absolute spirit that means individual consciousness, society and culture (scientific, aesthetic, religious spheres of value) (Adorno 1975). Eighty years later Charles S. Peirce (1991) was already able to rely on a cruel biological

experiment to verify Schelling's philosophical speculation. For Peirce 'absolute spirit' consists inter alia in logical reasoning, inferential operations, etc., underpinning a kind of behaviour and habit that ranges from animals like frogs to the propositionally differentiated use of language that has been observed only in the linguistic activities of human organisms. The hind legs of a frog 'severed from the rest of the body' do, 'when pricked, … infer' from the pain, take flight and try to jump off (Peirce 1991: 201). The evolutionary idea that connects speculative idealism, young Hegelianism and American pragmatism of the nineteenth century is that material, physical, chemical, organic and cognitive processes occur in the same world as ideas, propositions, thoughts and inferences, relating the social, subjective and natural worlds to one another internally. Abductive, 'synthetic inferences' thus have 'a *fundamentum in re*' (Habermas 1991a: 28).

There are more differences: firstly, the fact that in social evolution and the cognitive evolution of consciousness there can be cognitive and normative evolution, whereas in natural evolution this is impossible. If there is a kind of learning in natural evolution before the evolution of primates, say for trees, mushrooms, dinosaurs, birds or mammals, then 'learning' can only be ascribed retrospectively to the display of genetically fixed capacities. However, there is recent research on epigenetic and behavioural learning processes which go beyond the mere display of genetically fixed capacities (Jablonka and Lamb 2014; Moore 2015).[7] For instance, English blue tits, which in the 1940s learned (and later unlearned after the way milk is bottled and

7 This is an important, indirect form of motivating others to learn to do what you can do yourself, that is, of teaching. In the case of imitation learning, which is 'relatively rare' in the animal world, but which occurs in songbirds, whales and zebra mongooses, protective enabling of educational behavior is even supplemented by teaching through active demonstration. The mongooses organize themselves in small hunting groups, in which the juvenile gang leaders teach the offspring to crack large hard-shelled eggs. Since the offspring can only do this through a mixture of construction and (constructively limited) chance (trial and error), there is a pluralization of different cracking cultures even within a community (Jablonka and Lamb 2014: 164,

delivered changed) by observation, trial and error, to open milk bottles capped with aluminum foil in order to eat the accumulated fat cream on top of the milk, passed on what they had learned to their offspring by restraining themselves and preventing the adolescents from taking the work and the food from the little ones. In this way, they ensured the latter a sheltered space in which they could teach themselves to peck through the bottletops by trial and error (Jablonka and Lamb 2014: 163). The black rats who found their way to the pine forests of Jerusalem in search of food learned in a similar way to extract the tasty pine nuts from the cones, using a similar pedagogic of indirect, student-centred instruction to pass what they had learned to their offspring (Jablonka and Lamb 2014: 169). There are only a few animals that can imitate others, such as songbirds, whales and zebra mongooses. In the latter case observers have noted that mongooses supplement student-centred (saving sheltered space for self-instruction) with teacher-centred instruction (by demonstration and imitation; Jablonka and Lamb 2014: 164, 171, 422f).

However, cases in which genetically fixed capacities meet a complex social environment are rare. Cases are not complex enough because of a lack of linguistic communication and complex forms of society formation, and they are never made explicit for the actors themselves. In general, learning by future generations through teaching, or transmission by tradition and socialization is absent. Punctuational bursts or tipping-points play a very different role in social as opposed to natural evolution. Though punctuational bursts are not impossible in natural evolution (as a result of, for example, meteorite strikes), revolutions – including technological breakthroughs – form an anticipated and systematic element of social evolution only, as we have highlighted above with regard to negation-driven changes to existing orders from early civilization through the four Axial Ages.[8] This is a pattern that has had a major

170f, 422f) The latter can often be observed in big ape societies too (Boesch 2012).

8 This anticipation mostly pertains to the expectations that revolutions will continue to take place and technological breakthroughs will continue to happen rather than an anticipation of their content or effects.

impact on world politics since the onset of complex forms of human civilization, from the pre-Axial Age era until today.

How can we explain the differentiation between normative and cognitive evolution in human subjects and societies? This differentiation seems to be constitutive for humans and their societies. However, there is still a continuum of change and learning that can explain punctuational bursts and tipping points not only by natural catastrophes (such as food crises, protein shortage or climate change) but also by crises, conflicts and contradictions that are internal to human societies and due to the language-based communicative forms of the social integration of growing disintegration (internal complexity).[9]

In this context, chimpanzee language is a key that opens the evolutionary continuum and explains the gap that divides human from big ape societies. All big apes (like many big animals) have a rich emotional 'language'. Big apes regularly perform grooming reciprocally. Moreover, chimps are more inclined to share their prey after reciprocal fondling and grooming. In particular, if chimps have recently been cuddled by others and freed from fleas and other mischief, their empathy grows (Muller and Mitani 2005: 275–331; Olsen 1997: 114). No doubt, chimps are feeling, emotional, empathic animals, who even show a kind of compassion as Darwin and Kropotkin famously observed. To a certain extent, chimps are sentimental animals, as are humans. However, they seem to have no moral consciousness, no sense of justice and they cannot accept or – even more importantly – deny reciprocally binding norms. They have no normative expectations and no normative obligations. They feel no normative pressure at all (and therefore cannot suffer from egoism), since they can perform reciprocal empathy, but cannot state and establish what they perform. They cannot deliberate and talk about their reciprocal relations – either factually or (even more important) counterfactually. But they can talk and produce cultural diversity to a certain extent.

9 See the interesting interpretation of Hegel's philosophy of law by Gurisch 2023. Luhmann describes the integration of disintegration as 'die noch zusammenhaltbare Ungleichheit' – the diversity that can still be held together (Luhmann 2019: 25).

They learn socially from others but cannot reverse or generalize what they have learned. Therefore, they can preserve it only as performative know-how, not as informative know-that in cultural memory. They can draw the attention of others to what they want to have, do or eat, but not show it to others or share knowledge of facts with others. It follows that they cannot divide their attention and teach their kids what they themselves have learned (or at best they can do so only in a rudimentary fashion). 'Divided attention is a trait specific to the human race' (Greenwood 2015: 119). Unlike spectators at a football game, chimpanzees never 'focus their attention on the same event because they cannot play and exchange social roles. They coordinate their actions with their group mates, but they cannot understand their interactions as self-made roles independent of behavior [i.e., abstract or abstracted] and therefore interchangeable. This is exactly what only humans can do so far, and this is what all cooperative activities are based on' (Greenwood 2015: 119).

There is an astonishing cognitive use of different but meaning-identical symbols in chimpanzee societies, and an even more astonishing increase in apes learning ever more symbolic communication, since for a couple of generations a lot of them have lived in hybrid societies where 'modern-day apes interacting with cooperative humans' is part of their everyday life (Tomasello 2008: 193). In homogenous as well as in hybrid societies, apes regularly use different symbolizations for the same imperative speech-act – for example, if a male chimp wants sex, he can direct his pointer (pointing gesture) to his erect member (A), and if that does not work, he can hit a bush with his front paws (B), and if that fails too he can use a third gesture (C), or reverse the order (C-B-A) or use any combination of symbolic gestures B-C-A etc. He may also learn and use even more gestures which are equivalent to one another (A=B=C). The same applies if a chimp wants something to eat from others, in particular humans.

At this level, the ability of the big apes to abstract (from the specific form of their gesture) is nearly the same as for humans, whereas the ability to perform speech acts is not. The apes can understand and perform only imperative speech acts reciprocally, and negate (or neglect) them or follow them but only through their behavioural reaction, not symbolically. Some other speech acts,

especially informative ones they can understand and accept only from the point of view of the recipient. But they cannot negate them. They can understand the informative message, but not pass it on as a speaker because as a speaker they cannot dissolve the propositional content from the form of the speech act. They only can express their imperative request to get what the human pointing finger promises. Because they cannot inform each other reciprocally, they cannot chat and gossip (the most unique and important human characteristics). This is the crucial point that explains why they cannot reverse roles, cannot take an impartial third-party position, cannot construct counterfactual alternatives to either their individual or their social form of life hypothetically (Boehm 2001: 187–191). Therefore, they cannot make the rules they follow as rules explicit (and only through this explication do the rules become rules that – unlike genetic programmes – constitute a new formation of society) (Brandom 1994). They can demand food from others but see no reason, no need, no obligation to give food to another if the other wants or needs it. They can demand sex from others but see no reason to have sex if the other demands it. Demanding is the only role they can play reciprocally but without any kind of reciprocally binding obligation. If a researcher points to food which the apes could not have perceived before, they come and grab it. If she points to a vessel which hides the food with the same intention of helping them, they get the information that there is a vessel, hence they get the pointing intention but never get the helping intention. They even get hidden intentions, but only instrumental and imperative ones (Tomasello 2008: 14, 18, 26–30, 37–40, 202–206). Therefore, they cannot cooperate beyond the display of their genetic programme. But, and this is the closest point they reach to transgressing the border to becoming human, they can learn in hybrid societies to cooperate with humans; however, they cannot when they are only among themselves (Tomasello 2008: 193).

It is precisely at this point that the normative evolution of individual human subjects (1) and their society (2) departs from the cognitive evolution. What finally makes the difference on both levels is the turn from deviant, negating and resisting behaviour to explicit negation and contradiction. In individual and social evolution varia-

tion is exclusively brought about 'through a communication rejecting communication content' (Luhmann 1997: 461). This rejection contradicts 'the expectation of acceptance or simply an assumed continuity of "as always"' (ibid.). Without the 'daily mass production of deviant, unexpected, surprising communication,' that is, of 'contradiction' (and only if the communication is understood *as* contradicting) 'not in the logical, but in the more original dialogical sense' (ibid.). Only if the evolutionary pool of variation is stuffed with negation can human social evolution take off. This is the 'tremendous power of the negative' (Hegel 1952: 29). The socially 'existing contradiction' (Hegel 1975: 59; Hegel 1970: 332).

Normative evolution of the subject

In a well-known experiment a biologist cheats an ape to whom he often gives food with some inedible fake nuts. After a couple of tries the chimp gets the hidden cheating intention (that belongs to the inferential network of instrumental and imperative speech acts that the apes make use of reciprocally: they can cheat, and they understand when they are cheated). Then she (or he) will throw the fake nuts aggressively back at the biologist. This looks exactly like moral resentment, but it is not, at least not yet (Strawson 1962: 187–211). Apes and crows can cheat but not lie, because lying presupposes the informative use of symbols, cooperation, understanding how to help each other, having normative expectations and obligations etc. (Tomasello 2008: 202; Boehm 2001: 187–191). Therefore, the ape's (for us) highly understandable outburst of rage was still a Schellingian-Adornian impulse, a pre-form of *Geist* and normativity.

The crucial step from the pre-form of the *Geist* of normativity to the form itself is made at the moment when a small human child gets a small piece of cake and her big sister gets a big one, and the small kid asks: 'Why do I get a smaller piece?' This question opens a new discourse that splits off the normative evolution of the subject from its cognitive evolution.

However, this division is evidently only possible through the informative use of symbols and the entire network that hangs on it. It enables the step from impulse to protest, from resistance to con-

tradiction, from deviant behaviour to negations and negative statements, from unwillingness to be dominated to a sense of injustice. 'Very often it is the injustice suffered that brings the laws of equality to consciousness' (Piaget 1973: 311). The little girl was right. By evoking the laws of equality, she jumped right into the centre of normative thinking. Equality can be conceptually defined as the negation of natural or primordial differences, accompanied by moral resentment: outrage at the injustice of unequal treatment, based on 'distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.' (Art. 2 Universal Declaration of Human Rights 1948; Tugendhat 2007: 137–139). It is here that the normative evolution of the subject meets the normative evolution of society.

Normative evolution of society

There is some evidence that brother or sister chimpanzees (in rare but significant cases) are able to stage successful insurgencies against alpha despots and overcome the hierarchical structure of their society for some considerable time (between one and 20 years). During this time, they establish a kind of egalitarian brotherly rule over the female animals (as observed in a few highly significant cases in the wilderness of Gombe National Park, Tanzania), or an egalitarian sisterly rule over the male herd (as observed in two cases, one in Arnhem Zoo in the Netherlands, the other one in Yerkes National Primate Research Center, Georgia, USA). In every case the primary goal was to prevent a return to the hierarchical rule of a former alpha-despot, or the rise of a new one (i.e. a 'counterrevolution') (Boehm 2001: 187–189, 237f, 252f; Muller and Mitani 2005; Goodall 1986; Wilson 2012: 366).

What seems unique in the case of chimps is the change in societal structure from despotic hierarchy to egalitarian cooperation with flat hierarchies between sexes. An explanation might be that chimps not only have the cognitive capacity to abstract from the different symbols for the same things (demands), they can also, it seems, use their cognitive capacity to detach or abstract themselves to some extent from the close ties that bind their cooperation with

genetic programmes of hunting and collective struggle (status, war etc.), and use the same schema of cooperation for various other (i.e. new) applications in insurgencies and, even more astonishingly, for cooperative suppression of a rising alpha despotism over a longer period of time, and to stabilize a kind of isonomia between the ruling half of the herd (that seen from afar resembles the relationship between the huge male, armed, and to a great extent slave-owning and 'democratically' ruling elite in ancient Athens and the rest of the population).

In all cases of successful insurgencies, the apes coordinate their own actions through socially learned gestures and a variety of challenging and angry Waa-vocalizations, and stabilize their egalitarian brotherly or sisterly life by a significant increase in reciprocal grooming, fawning, and other expressions of mutual sympathy that reinforce their sense of belonging and represent some pre-evolution of communicative coordination of action. This type of communication does not, however:

> permit the sharing of detailed behavior profiles, or the exchange of specific information in tracking individuals and watching for incipient signs of deviance, or discussions of what constitutes a desirable political milieu. A definitive reversal of the flow of power in bands requires some kind of vision of the kind of political society that is desired (Boehm 2001: 187).

This is the limit which the apes cannot transgress. Even if the Arnhem female chimps were:

> operating on an intentional basis, so they may be said to have goals – perhaps even 'values' insofar as the goals seem to be shared. They regularly cut down the power of males and circumscribe their roles, a pattern reminiscent of sanctioning and social control. However, their behavior preferences remain implicit in their behavior; in the absence of spoken symbolic language, they can neither formalize their behavioral preferences into a 'moral code' nor exchange detailed information about the deviant behavior of which they disapprove' (Boehm 2001: 188f).

Hence, the apes can carry out a successful insurgency, but not a revolution that produces new political institutions and ensures that the new semi-egalitarian societal formation is passed on to the next generation. They fail to make the step from Camus to Sartre, from revolt to revolution, indeed, they do not even show any interest in this step, because it is not in their world. Chimps can live without domination, but neither of them can signal to the other as graffiti in Berlin once did: *Anarchie ist machbar, Herr Nachbar!* (Anarchy is doable, dear neighbour!). Since they lack an informative, gossipy and argumentative, contentious and polemical use of language, they lack access to the tremendous power of the negative, and thus access to counterfactual, hypothetical, projective and evaluative thinking. Consequently, they cannot compare the new societal formation with the old or construct a mythical counter-memory of a successful uprising.

But this is exactly how a number of important ethnologists explain the emergence and the extremely long duration (between 200,000 and 25,000 years[10]) of egalitarian, acephalous small societies, which Christopher Boehm and others have described strikingly as reverse-dominance hierarchies: as societies which are organized in an egalitarian way in order to prevent the return of alpha-despotism, whether historical or mythically constructed – in other words, to prevent the counterrevolution (Boehm 2001, 1993: 227–240; Woodburn 1982: 431–451: 163).[11] In the reverse-dominance hierarchy of these societies, there must still have been alive a warningly remembered reference to an original dominance hierarchy that was overcome, overthrown, turned into its progressive opposite some time ago in the grey past (Knauft 1991: 391–428; Boehm 2001: 87; Sigrist 1994: 41). Moreover, if we take Pierre Clastres' (1974) work on war between egalitarian societies into account, then we can see that these wars are primarily anti-statist and anti-imperial wars. They are not aimed at conquest or building a hierarchical state or an empire, but at preventing state and empire-building in

10 The numbers are highly controversial, cf. Hauser, Chomsky and Fitch 2002: 1569–1579.

11 See also: Morris 2014: 22–37; Cashdan 1980: 116–120; cf. the debate with critics and Boehm's reply (Boehm 1993: 240–254).

order to ensure a permanent suspension of hostilities. In terms of Christopher Boehm's (1993) pathbreaking research, these societies were, thus, organized both internally ('nationally') and externally ('internationally') as such 'reverse dominance hierarchies'.

With the construction of this memory the coevolution of the cognitive and normative evolution of society began. Scriptless egalitarian and acephalous societies of hunters and gatherers stigmatized domineering relations by 'burning the law of equality, the prohibition of arrogance, into the body of the initiate' (Clastres 1974: 159). The disciplinary society was co-original with the normative evolution of egalitarian freedom, but the counter-memory reminded the disciplinary subject that the revolution against real or mythical alpha-despots can be repeated should they appear again, that it can be repeated in the event of the evolutionary emergence of a completely new formation of imperial class-rule by literate and educated slaveholders, and that it can be repeated against a disciplinary society that stabilizes their egalitarian freedom at a price that might be too high.

3.3 Core evolutionary concepts: Autonomization, hierarchical complexity and coevolution

Focusing on social evolution, its formal logic is defined by a sequencing of variation, selection and restabilization, deeply grounded in social structure and history, that rests on the inseparability between communications as society's basic units and its social structures understood as communication-based systems. Thus, over time – through reiterated communications – systems with specific properties and internal power dynamics emerge as an effect (and, as noted, a boundary condition) of this sequencing. This also relates to world politics, as a social realm with distinct socially constructed (and therefore non-static) systemic properties (Albert 2016). We therefore distinguish analytically between the formal logic of sequencing and systemic properties, while highlighting that, from the paradigmatic perspective of constructivist theory, they are inherently interwoven. These systemic properties boil down to a complex yet clearly defined social ontology that allows world politics to be conceived of as part

of what Luhmann (2000) refers to as the system of politics understood as a non-linear social realm (Albert 2016). Three key structural effects are often highlighted in social evolution theories indebted to the paradigmatic tradition to which we have recourse, namely the 'autonomization of levels' (Stichweh 2002), the coevolution of these levels and, finally, their internal 'hierarchical complexity' (Commons and Ross 2008; Vrba and Gould 1986). We will further illustrate how these three structural dimensions of social evolution affect world politics in what follows. We begin by outlining their theoretical rationale, and in this context, it is important to re-emphasize that we see world politics as a realm in which, as in every other social realm, there is always both structural evolution and an evolution of ideas/semantics. This follows from our general take on the connection between social evolution and social evolutionary theory. It is impossible to have one without the other.[12]

In the context of world politics as a distinct social realm, autonomization relates to the emergence and restabilization of politics as a self-referential social system that evolves in relation to other social systems, such as law, economy, religion, science, etc. Autonomization highlights the decoupling, however precariously, of politics from society-wide logics of segmentation or stratification – although these forms of differentiation may very well endure as system-internal forms (first and foremost in the strong forms of stratification and hierarchy in world politics over much of its history during the last two or three centuries, for instance between great powers and other units, or between the West and the Global South; Zarakol 2017; Stetter 2008). It is about what we mean when we say that international politics or world politics is 'systemic', a widespread claim in IR but not always backed up by an understanding of systemic properties sufficiently embedded in social theory. From a general theoretical perspective that looks at society as a whole, autonomization thus addresses the increasing complexity (not be mistaken for a simplistic distinction between 'primitive' and 'civilized') at the level of social order from hunter-gatherer

12 See Preyer 1998 for an attempt to describe the evolution of a world system in terms of structural evolution only.

societies after the invention of language (and before the Neolithic revolution around 9000 BCE), via hierarchical empires and centre–periphery societies following the diffusion of writing since the end of the fourth millennium, to the modern, functionally differentiated world society, that was arguably stabilized by the invention of book printing in the course of the second millennium CE and the telegraph during the nineteenth century. As Luhmann and others (including Habermas) have shown, this integration of society within an overarching, yet internally differentiated order is accompanied by a growing tendency of social systems to function according to self-referential logics, entailing growing internal differentiation. Luhmann (1995: 34–36) uses the term 'autopoiesis', but 'autonomization' is more widely used. This autonomization of social systems in human history undergirds the evolution from hunter-gatherer communities (which knew only one system, namely tribes), via Neolithic segmentary communities to stratified classes (that relied on two mutually exclusive strata based on personal properties – ruling class versus subjects and slaves). Emergent world society then produced a theoretically unlimited number of autonomous social systems, such as politics, law, religion, economics, sports, art, science, etc. – and distinct subsystems such as a world political system in the context of the autonomous system of politics. These systems are, as far as their logic of reproduction is concerned, decoupled from personal properties and differentiated internally (Albert and Buzan 2010).

Hierarchical complexity refers to the way in which systems at a new stage of evolution accommodate previous forms, for example the various ways in which earlier forms such as segmentation, stratification and centre–periphery differentiation permeate functional differentiation. We have noted above that world politics as a system that is functionally differentiated from other social realms through internal differentiation accommodates a wide variety of other forms of differentiation, such as segmentation into like units and stratification based on hierarchical power differences, as well as functional differentiation (e.g. international regimes). Hierarchical complexity also shares many characteristics with Foucault's archaeology of knowledge, which also stresses how discursive formations integrate the 'antecedents' (Foucault 1972: 143) into a given regime

of truth. The antecedent is 'subordinated to the discourse' (ibid.) and is integrated on the basis of a hierarchical logic that 'may also involve a temporal vector' (ibid.: 168). However, at the same time its traces cannot be eradicated. Antecedents shape the manifold bifurcations and contradictions that undergird the *épistème* as well as the 'discontinuities, ruptures, gaps, [and] entirely new forms of positivity' (ibid.: 169), that any social form encounters and that have to be integrated into a critical theory of power in social evolution, as Tang (2013: 137) observes. Finally, and taking into account the aforementioned coevolution of society and consciousness, theories of social evolution emphasize increasing complexity at the normative level, a characteristic unique to social evolution. We refer here to changes in normative constraints as, for example, postulated in Kant's cosmopolitan reflections, in Elias's theory of civilization (Linklater 2016) and particularly in Habermas's approach to the evolution of society (Habermas 2020: 139, 862; McKitrick 1993).

Coevolution refers to the way in which an autonomous system (or subsystem) of this kind relates to another system as an environment that is relevant to the reproduction of them both, for example how a social system relates to the human psyche or to the natural world (Diamond 2005), or how a social system like politics relates to another social system such as law (thereby again pointing to significant overlaps between Luhmann and Habermas, e.g. inasmuch both address the coevolution of politics and law; Brunkhorst 2014). The power and knowledge nexuses identified by Foucault can also be understood as features of coevolution, as in Foucault's (2008) treatment of the early Christian Church. Reproduction in the neo-Darwinian theory of evolution is thus not a muscular ability to outlive others in a struggle for the survival of the fittest. Belief in what Stichweh (2002: 10) characterizes as an 'eliminative confrontation of a system with its environmental constraints' is outdated. Contemporary theories of evolution prefer to highlight the random forms of often precarious adaptation, the contingency and non-linearity of change, as well as a great deal of non-functionality on the part of structures in relation to their environment. One example would be the growing emphasis on 'risks' and 'disorder' in modern society and the ubiquity of 'contingent local adaptations' (Stichweh 2002: 22), such as the decoupling

between world culture and concrete local practices (Meyer 2000). Another example would be shifts in the prevalent forms of power as studied by Foucault, from sovereign and disciplinary forms of power, for example, to those that are particularly central to modern social orders, such as governmental power, which hinges on much more indirect strategies of maintaining and challenging political authority. As highlighted above, coevolution also encompasses the relationship between social forms and consciousness. This is why social evolution understood in this way does not lead simply to some kind of unconstrained flow of cognitive learning, but also to normative learning processes that might result in prophetic moral universalism, human rights legislation or the 'modern cult of the individual', as in Foucault's notion of technologies of the self in the context of governmental power (compare Durkheim 1933; Jung and Stetter 2018). Normative learning leads to a specific form of conditioned adaptation in which adaptive improvement can be normatively constrained: 'not justice has to submit to adaptation but adaptation has to submit to justice' (Brunkhorst 2014: 36). Therefore, normative learning, as Adler (2019: 29) observes as well, puts constraints on selective processes and adaptive improvements. All these diverging forces, paradoxical imperatives, fragmented regimes and contradictory interests, together with normative constraints thereby influence, modify and limit the selective processes and changing directions of social evolution.

These core evolutionary concepts may be focused on individually or be used as a kind of prism in order to analyse a specific evolutionary process or a specific aspect of one. In order to sharpen understanding of what these concepts mean, this is the way that we will be using them in the empirical applications from world politics that follow. However, it is important to point out that focusing on, for example, autonomization, does not mean that there will be no hierarchical complexity present. This is a point that we will take up in each of the individual illustrations in the next chapter. As this also means zooming in on more 'traditional' subjects within the purview of International Relations, we need firstly to discuss and relate to the various ways in which (theories of) evolution have been used in approaches circumscribed by various disciplines.

3.4 Existing approaches to evolution in IR

Mere use of the word 'evolution' in IR contexts does not necessarily say anything about explicit engagements with (theories of) social evolution. Quite often 'evolution' is used loosely and interchangeably with concepts like 'development', 'emergence', or 'change'. We are not addressing these approaches here, only referring to instances where use of 'evolution' points to a specific quality of change in world politics, which allows for the evolutionary steps of variation, selection and restabilization.

Upon first inspection, this clearly pertains to works that consider evolution in world politics by analogy with, and with direct reference to, evolution in the natural world, whether at the level of species or that of individual genes or neuronal synapses (Johnson 2015). Though these contributions seem to be gaining some purchase in the discipline, we can dismiss them here essentially for the two reasons already mentioned: because theories of natural evolution cannot account for processes of social, cognitive and normative evolution, which necessarily require and are characteristic of complex *social* contexts; and because they have difficulties in accounting for the tipping points characteristic of social systems, namely instances of revolutionary change. Theories of natural evolution in IR tend to focus on the change of actors and units. By doing so, however, they overemphasize the role of actors as triggers of evolution, ignoring the fact that the basic unit of evolution in social systems is not actorhood, but rather, as we will show in more detail below, discourse, communication and practice – in other words those social forms that engender meaningful social actorhood in the first place (Meyer and Jepperson 2000). It is only through a focus on the social evolution of discourse, communication and practice that actors can be related to the broader social environment in which change takes place, for example with respect to changing notions of actorhood within a system triggered by cognitive and normative evolution (see Luhmann 2012; Wendt 2015). Put differently, not only do states, as a particularly important kind of actor, evolve – they also reflect on this. We do not conclude from this, however, that theories of natural evolution would be of no use for IR: quite the contrary, they can

be put to good use if properly applied. They already come into play indirectly, as many theories of natural evolution nowadays challenge the very idea that natural laws are absolute and beyond history. A broad stream of scientific theories from microphysics via theories of the evolution of the universe (Pape 1994; Hampe 2010) to general systems theory, quantum theory and thermodynamics (Nicolis and Prigogine 1987) back the idea that not only the presumed natural laws governing the human realm (Morgenthau 1946), but even the natural laws of physics undergo change (Unger and Smolin 2014). Due to mechanisms of accidental variation and evolutionary change, theories of natural evolution also keep space open for freedom of action (Wartenberg 1971; Pape 1994). Theories and analyses of natural evolution also come into play directly when the goal is to analyse the relation between social and natural evolution, for example how bioclimatic conditions on the islands of Japan were one precondition for the rise of Japanese culture, including its foreign relations (Diamond 2005), or how climate change affected political constellations, for example during the Little Ice Age in the late middle ages and early modernity. However, the important point here is that in order to make use of theories of natural evolution, it is necessary to first come to terms with the specificity of social evolution. Only then can both concepts of evolution be related to each other. Directly applying theories of natural evolution that cannot account for cognitive and normative learning and revolutionary change, to realms primarily characterized by these very processes, or considering actors and not communications, discourse and practice as the basic unit of evolution, constitutes a theoretically unwarranted shortcut.[13]

There are, arguably, very few studies on the nature of, and change in, world politics in IR without at least an implicit account of social evolution. The lines here zigzag, as the role that individual approaches, explicitly or implicitly, bestow on social evolution depends entirely on the primary analytical frames of reference used.

13 And it should be noted that, in our view scandalously, this shortcut is regularly taken by completely ignoring even the existence of theories of social evolution.

It makes a big difference whether social evolution is seen to pertain to the basic structures of the international system, or just to cognitive learning in specific settings of foreign-policy decision-making. Taking a non-evolutionary stance regarding the main analytical frame of reference usually does not preclude conceding social evolution on other levels. Thus, for example, while a Waltzian international system is clearly conceived in structural-functional and non-evolutionary terms as regards system structure (Goddard and Nexon 2005), it knows bounded evolution in terms of polarity and could easily concede that social evolution happens below the systemic level. In fact, it could be argued that some view of 'bounded evolution' is characteristic of a range of approaches in the realist tradition. While invariably based on a strong conception of things that do not change – universal laws to be found throughout history such as anarchy or the nature of human beings – there has always been a strong trait in realism that emphasizes that this lack of change on a grand scale does not preclude variation going on all the time and that, for this reason, specific events and pathways cannot be 'calculated'.[14] Machiavelli states that things are 'different' in Siena from the way they are in Florence, and in a famous exchange on whether repetition facilitates theorizing or not, Morgenthau states that 'both [Martin] Wight´s and my orientation are historical, and it is this historical orientation that sets us apart from the present fashionable theorising about international relations' (Morgenthau 1970: 251). Social evolution cannot change the laws of nature or of the human realm, but it takes place within the boundaries set by them. Old-school realists, even when in search of 'general causes', remain 'conscious of the role accidents play in history' (Morgenthau 1946: v). What Morgenthau seems to have in mind is something very close to evolutionary contingency and evolutionary tipping points.

While realists set general boundary conditions for the possibilities of social evolution, another prominent way of setting such conditions can be found, as we have already suggested, in the practice of assigning overarching importance to 'benchmark dates' that define international society. In benchmark date accounts, social

14 This was the main theme of the Second Great Debate in IR in the 1960s.

evolution may or may not occur, but such accounts start, by definition, with the idea of crucial interruptions, such 1648, 1789, 1919 or 1945. These dates were tipping points: things were different before as compared with the period after. While Buzan and Lawson (2014) in effect ask for a more evolutionary orientation and call for benchmark years to be de-emphasized, to focus instead on dates when nothing 'important' happened (according to a classical benchmarking rationale), they leave it open for others to explore whether and to what degree benchmark-date-oriented accounts contain inherent claims that benchmark dates are equivalent to 'revolutions' in theories of social evolution. They refer, for example, to 1860 as a benchmark date for international relations at which several nested processes intersected, such as rationalization, industrialization, technological change, modes of warfare, and ideological change (Bright and Geyer 2011). The degree to which benchmark dates thus defined are convincing can only be ascertained by looking more closely at individual studies. It seems quite likely, though, that those who rely on benchmark dates while putting them into historical context are more likely to be sensitive to more subtle evolutionary developments than are broad (and often dubious, see de Carvalho et al. 2011) statements about epochal differences such as 'Westphalian' vs. 'post-Westphalian'.[15]

It should be emphasized that the possibility of an implicit social evolution is also present in cases where IR studies operate with strong meta-historical narratives, that is, versions of a philosophy of history. Usually such narratives are normatively laden. They can invariably be found in cosmopolitanism and liberalism, and more generally where 'grand narratives' or narratives of progress are at work. One example would be Andrew Linklater's (2016) work that draws on Norbert Elias's theory of a process of civilization. The least normative, yet probably most explicitly teleological contribution in

15 From an evolutionary perspective, rather than speaking about benchmark dates it is more appropriate to speak about a 'threshold period' (*Sattelzeit*), as Reinhart Koselleck 2018) does when he postulates that most of our concepts were irrevocably transformed over the period 1750–1850.

that context is probably Alexander Wendt´s (2003) article on the inevitability of a world state.[16]

The most prominent role that evolution plays in IR analysis can probably be found in the field of research that deals with the emergence, development and spread of international regimes and norms (e.g. 'norm cycles'). These approaches share what Emmanuel Adler (1991), following Ernst Haas, has called an 'evolutionary epistemology', in which learning plays a central role underpinning change. Actors study the past, develop new cognitive models on that basis (variation) and put them into practice (selection), as John Ikenberry (2000) has argued in relation to great powers. Here, the design of post-conflict orders (restabilization) is based on cognitive reflection by new great powers about the failure of previous great powers to render past post-war orders durable. Still, even this explicit reference to evolution remains silent on the specificity of evolutionary mechanisms in the social world, a feature that it shares with other approaches in IR.

The fact that evolution is formally characterized by the three-step interplay of variation, selection and restabilization, even though, particularly in social and political matters, selection is, as we will outline in the next section, not the *only* mechanism of change (Gould 2002; Brunkhorst 2014) is, thus, often neglected, particularly in debates on the concept of learning. Most of the approaches mentioned above remain silent about these three central elements of evolution. They also remain silent about the basic unit of variation – a single, complete communicative speech act (or a single, complete symbolic gesture). Communicative operations (speech acts, gestures) are complete only through the affirmative or negative reply of an Alter Ego, and only negation (deviance) can trigger variation. This has been explained in linguistic theory from Humboldt to Chomsky over

16 Although it is not directly concerned with IR, Wendt's newest book (2015) clearly indicates that in the future he will be reinforcing this teleological view. It is remarkable that while in history, particularly as a result of 'global history', narratives of 'meta-history' and the philosophy of history are nowadays decidedly out of fashion (Rüsen 2014), they should still play such a prominent role in contemporary IR.

and over again, but only Luhmann and Habermas (both following the linguist Karl Bühler) have applied this linguistic discovery to the theory of social evolution, a necessary move, we maintain, given the centrality of language-based communication for human society. The key observation here then is that, in social evolution, communicative variation replaces genetic variation, and that is why communication, discourse and practice – not actors – are the basic units of social evolution, triggering a co-constitution of societal evolution and consciousness-related 'learning'.

It is on this basis that we argue that the 'value-added' of theories of social evolution is that they can help us understand changes within a complex social realm without relying on assumptions of fixed structures, ahistorical conditions, or causal laws within a system. And while there are vastly different opinions in the case of IR as to whether that complex social realm should be called an international system, a world society, an international political system or something else, all of these terms seem to allow for a much broader and systemic application of theories of social evolution that have been around in the social sciences for literally centuries, yet up to now have barely been registered explicitly by IR.

Our approach is certainly not the first to introduce a formal and explicit understanding of evolution. Within the discipline of IR alone, there is a huge body of literature that could be read as having at least implicit traces of accounts of social evolution, such as when Morgenthau discusses the need for a historical perspective on continuity and change in international politics and argues that, when in search of 'general causes', IR needs to remain 'conscious of the role accidents play in history' (Morgenthau 1946: v). However, these contributions almost always neglect the basic difference between the evolution of society as a highly complex social realm on the one hand, and the evolution of individual human psychological and biological features on the other. Neglecting this difference not only risks leading to biological reductionism but is usually also accompanied by a neglect of, if not outright ignorance about, the existence of a rich tradition of social evolutionary theorizing in the social sciences (see Lebow 2013), parts of which we discussed in the previous section. There are, as mentioned above, some schol-

arly works that think of evolution in world politics as analogous to evolution in the natural world, whether at the level of species or that of individual genes or neuronal synapses (Johnson 2015). We caution against taking this shortcut for the basic reason already highlighted that, while natural evolution matters for world politics as a boundary condition, it does not inform us about the way change occurs at the level of social systems, that is to say in realms that are not made up of biological elements such as cells or other organisms, but rather by social entities that possess the ability to reflect about their sociality.[17] In IR literature two other approaches in addition to ours can be discerned that have recently explicitly attempted to study world politics in terms of evolution.

Shiping Tang (2013; see also 2010 and 2020), in *The Social Evolution of International Politics*, offers an overview of a range of evolutionary approaches in IR, and shares with us the view that natural and social evolution need to be distinguished from one another. What sets Tang's approach apart from our own is his strong focus on an international system of states as the evolving system, whereas, for

17 Put differently: the direct application of theories of natural evolution to the study of social evolution commits a category error. It assumes a comparability of fundamentally different social and natural realms from the perspective of a theory of natural evolution, and overlooks the fact that the only thing that is shared by theories of social and natural evolution is something different, namely an 'elementary grammar of *every* theory of evolution' (Giesen and Schmid 1975: 394). There is a distinct, but small category of work in IR that explicitly deals with social evolution in world politics without falling into the trap of simply transplanting theories of natural evolution to the social world. A core contribution is by Jason Sharman (2014), who, on the basis of sociological institutional reasoning, highlights the centrality of selection dynamics in relation to the emergence of states as leading actors in the international system. However, he does not discuss the issues of communication and social ontology in any detail. Others, such as Thompson (2001) and Modelski and Devezas (2007), have provided intriguing evolution theory perspectives on world politics, but they differ from our approach in their consistent choice of states instead of communications and discourses as the main unit of analysis.

basic methodological reasons, we look at world politics not through the lens of a specific type of actorhood, but through specific forms of communication that engender notions of actorhood in the first place, a point completely missed by Tang (for an IR perspective on the social underpinnings of state-actorhood see Sharman 2014). Moreover, being focused on state-interactions, Tang does not engage in a wider discussion of the different mechanisms of power that operate in world politics beyond the quite simplistic realist notions of power from which he draws. So, for example, he refrains from juxtaposing different forms of power that are widely discussed in critical IR literature, including those, like governmental power and resistance, that highlight the wide range of spheres of world politics in which forms of power other than those related to offensive and defensive realism are in play. Moreover, in our view, privileging the state unnecessarily limits the analysis of the evolution of world politics, although it can possibly lead to similar empirical observations regarding certain specific issues. A second thing that concerns us about Tang's study is that it ultimately advances a teleological and quite Eurocentric perspective of world politics by distinguishing between a zero-sum world of (offensive) states from their first emergence, and an allegedly somewhat more cooperative (defensive) world that came into existence largely from the end of World War II. This is problematic not only because it replicates a Euro-centric (or Americo-centric) narrative, widely and rightly criticized in IR by historical-sociological (cf. Schlichte and Stetter 2023) and post-colonial scholarship, which Tang does not take into consideration (Seth 2011). It also contradicts a key insight in (biological) social evolutionary theory, namely that, while providing a handy illustration for textbooks, the view that evolution proceeds in neatly separated epochs has become outdated (Bourke 2011) and needs to be replaced by a perspective on the emergent properties of novel forms of (social) organization that is, for example, well captured by notions of hierarchical complexity (see below). Seen from that perspective, the core evolutionary mechanism is not the supposed change from one form of organizing anarchy to another, as Tang claims in the tradition of Bull (1977) and Wendt (1999), but the effects that an increasing autonomization of world politics has on the way in which this system operates.

In line with Tang's interest in different forms of social organization (e.g. offensive and defensive realist eras) it is important to note that, as regards structure, the theories of social evolution in the paradigmatic tradition that we draw upon are interested in both single events in the form of erupting contestations and in the *longue durée* of the emergence, change and 'death' of broader social structures in human history. Social evolution theories thus understood may be able to identify stages of structural evolution in society as well. However, in contrast to historicist epistemologies, which underpin Tang's argument about an alleged shift from offensive to defensive realism, social evolution theories should stress the non-linear character of evolution. Being more concerned with macro-structures – such as power-cycles – than with the formal sequencing of social evolution and how they are essentially intertwined with social effects (i.e. a flat social ontology), Tang's work is too detached from social theory and therefore basically reproduces theoretically questionable state-centric and teleological assumptions as far as social structure is concerned.

Communication, in a nutshell, is also what distinguishes social from cognitive evolution – the bedrock of Emanuel Adler's wide-ranging contribution to social evolutionary theory. Social evolution as defined in the previous section is about the evolution of social systems as, and through, communication. While both social and cognitive evolution operate on the basis of meaning, and although processes of learning are certainly possible in social systems, cognitive evolution is ultimately only possible in psychological systems (that is, to put it more conventionally, in individuals) that, according to Adler, group together in various communities of practice. For Adler, communities of practice rather than communications are the main carriers of evolution. While these communities of practice are embedded in, observe and address, and in turn are observed and addressed by, social systems, and while, therefore, cognitive evolution is widespread and significant, social systems themselves do not evolve cognitively. Cognitive evolution certainly has massive consequences for social evolution in terms of providing 'input' for variations, and in terms of conditioning the likelihood of selections, but, from the paradigmatic angle central to our argument, it is

simply not social evolution (though, to be fair, based on the paradigmatic traditions he relates to, for Adler it is). However, given these linkages, it would be surprising if social and cognitive evolution were not closely related to each other and an analysis of changing forms of order did not often yield overlapping perspectives. It is in this sense that we think that, most notably, Adler's analysis and ours, although coming from different paradigmatic backgrounds and drawing on different sets of literature, can be related to each other. This also applies to the notion of a 'bounded idea of progress based on a common humanity' (Adler 2019: 5). We are, to be sure, sceptical of the idea that there is direct progress in evolution: both learning and unlearning are possible (Schmid 1998: 389). But we are in sympathy with Adler as far as an increasing complexity at the normative level is concerned, which figures, for example, in Elias's *longue durée* account of a process of civilization and is to be understood in our framework as the structural coupling between human consciousness and (communication-based) social systems. Despite highlighting (possible) similar outcomes here, we differ from Adler by separating these two dimensions. Adler, we would suggest, presents an analysis based neither on a theory of social evolution, nor one based directly on a theory of cognitive evolution, but rather offers a specific social theory that utilizes a theory of cognitive evolution.[18] That is also why our understanding of social evolution does not require us to highlight specific entities or agents as drivers or main subjects of evolution, as Adler (communities of practice) or Tang (states) do. We rather conceive of social evolution – and a possible advance in civilization – as a process that, through communications, engenders specific forms of actorhood to which agency is ascribed. In other words, we are putting forward a fundamentally constructivist understanding of actorhood all the way

18 Although this is a subject beyond the scope of this book, we assume that the theoretical bridge between Adler's social theory, which uses a theory of cognitive evolution and includes his previous work on practices, and a theory of social evolution, would be to account for practices as main subjects of social evolution (see Runciman 1998 and Müller 2010 on this in the context of other theories of social evolution).

down (Meyer and Jepperson 2000). The question then becomes how – under the condition of double contingency – forms of actorhood vary, get selected or deselected and restabilized and how, in specific social realms, communications are attributed to actors thus understood.

Another difference between Adler and ourselves pertains to the importance attributed to systemic factors. Adler identifies a cacophony of discourses triggered by a multitude of communities of practice in international politics. But he remains reluctant to define the encompassing structural characteristics of what we suggest is an autonomous system of world politics in which practices play out, suggesting instead that there is a mere 'plurality of international social orders' (Adler 2019: 137). While he concedes that social evolutionary theory has to be systemic, he refrains from embarking on systemic reasoning for most of his analysis, based on the somewhat paradoxical argument that, while he recognizes that the (cognitive) evolutionary theory he proposes is systemic, he wants to proceed 'without hardly invoking the concept of systems' (ibid: 9). Instead, he focuses on a multitude of communities of practice and on an evolutionary ontology that highlights 'becoming' and 'horizontal power' (ibid.: 45). While his study of cognitive evolution makes a great contribution to a better understanding of the emergence, consolidation and change of communities of practices – undoubtedly a central element in world politics – the driving ideas underpinning such communities and the competition between them, he remains conspicuously silent about their larger impact on world politics as a distinct social realm, including the arguably overwhelming centrality of vertical (i.e. hierarchical) power that has shaped this social realm, both historically and in the modern order (Mattern and Zarakol 2016). The reason for this is, arguably. that Adler attributes to notions of 'systems' or 'structures' a non-evolutionary and non-constructivist ontology of essence. While he appears to be particularly aware of Luhmannian systems theory, he fails to coherently engage with it and often misinterprets some of its key claims. This is evident in his cursory discussion of Luhmann. Besides not engaging systematically with Luhmann's social theory, Adler actually seems to be quite mistaken when claiming that Luhmann is not a 'theorist of

becoming' and lacks a focus on 'continual transformation and flux' (Adler 2019: 62). We are confident that a closer reading of Luhmann invalidates such an argument. For, whatever else one makes of Luhmann's theory and the way it relates to world politics, it undoubtedly lays out a radically constructivist understanding of social systems as emergent and 'in flux', and of the ever-evolving societal effects of communication. Social systems, in other words, do not exist outside and independent from communication. In Adler's account, social order also appears as a realm defined by countless interrelated communities of practice, but he refrains from discussing overarching systemic properties. This is legitimate according to the paradigmatic approach from which he starts, but it raises the problem of the borders of this social order, a problem that both Luhmann and Habermas identified in quite similar ways (see above). Finally, a polycentric and pluralistic perspective on the multitude of communities of practice as highlighted by Adler is useful in and of itself, but it also means that he, like Tang, risks underestimating power, the system-wide hierarchies and the institutionalized power differences between concrete social groups (e.g. states vs non-states; the West vs the Global South; great powers vs others; security professionals vs lay people) that, we would argue, have come into being in the course of the evolution of world politics as a distinct social system (Zarakol 2017). Tang (2013: 37) correctly notes that the notion of cognitive evolution and the focus on multitudes of communities of practice leads to the problem that 'power and real conflict do not really feature' in Adler's theory – while ignoring that the same applies to his own account's under-complex theory of power. This then might be the reason why, not unlike Tang, Adler falls into a somewhat modernist narrative of progress, that might be understandable against the background of an ethical motivation, but is theoretically and historically questionable.