



# Sauerian phenomenology: German Theory and Carl Sauer's *The Morphology of Landscape*

Maximilian Gregor Hepach

Institute for Arts and Media, University of Potsdam, Am Neuen Palais 10, 14469 Potsdam, Germany

**Correspondence:** Maximilian Gregor Hepach (hepach@posteo.de)

Received: 23 August 2022 – Revised: 5 July 2023 – Accepted: 21 August 2023 – Published: 25 September 2023

**Abstract.** Carl Sauer's *The Morphology of Landscape* is a foundational text for cultural geography. Instead of focusing on culture, however, this article pays special attention to Sauer's use of *phenomenology*. Through the lens of *German Theory*, I detail the debate around areal realism in German geography amongst Carl Ritter, Julius Fröbel, Alexander von Humboldt, and Alfred Hettner leading up to *The Morphology of Landscape*. By reconstructing the onto-epistemological problem that Sauer's invocation of phenomenology responds to, I extrapolate a Sauerian phenomenology for both physical and human geography.

## 1 Introduction

In their editorial to this theme issue, Korf et al. (2022:86, translation by author) call for a return “back to the future”, “reconstructing and reappropriating buried and sunk intellectual paths of thought”, namely those related to German-language theorists. By way of analogy, Korf et al. (2022:92, translation by author) compare *German Theory* to the wreckage of ships “on the ocean floor, in the sediments of continental intellectual traditions”. Following this call for a turn to German Theory, I will undertake a “deep dive” into the history of geographic thought, “archaeologically uncovering, salvaging, restoring, renovating, and revaluing” (Korf et al., 2022:92, translation by author) pieces of theoretical wreckage (for an excellent deep dive into *Italian theory* and its linkages to the history of German geography, see Minca, 2007).

My particular interest is in Carl Sauer's (1925) early work of *The Morphology of Landscape* (henceforth *Morphology*). Although it is commonly acknowledged that Sauer drew heavily on German-language geographers and thinkers in his *Morphology* (Kenzer, 1985; Penn and Lukermann, 2003), Sauer – born to German parents; raised in a “poor, semi-rural, German-American community” (Kenzer, 1985:266) in Warrenton, Missouri, and for 3 years in Germany; and Vice President of the Goethenia Society at the bilingual Central Wesleyan College as an undergraduate and “assistant German editor” (Kenzer, 1985:265) of the college's newspaper – is generally not regarded as a “German theorist” (see Korf

et al., 2022:86) but as the originator of cultural geography and the Berkeley School (Williams, 2009a, b). To this lineage of geographic thought, the influence of Berkeley anthropologists Alfred Kroeber and Robert Lowie is of greater import than that of Alexander von Humboldt, Johann Wolfgang von Goethe, or Alfred Hettner; all of whom are cited in *Morphology*. This “culturalist” reading of Sauer gave rise to the debate around “the superorganic” (Duncan, 1980; Solot, 1986), through which Sauer's continued relevance is adjudicated.

In what follows, I want to surface an alternate Sauer by assuming the perspective of German Theory. I here borrow the tactic of provincialisation from Korf et al. (2022:87) (and by extension from Chakrabarty, 2000), countering a perhaps one-sided culturalist, Berkeley reading of Sauer's *Morphology* with my own, one-sided German-theory reading. In doing so, I do not argue that Sauer is a (uniquely) German theorist but that a focus on German Theory highlights aspects of Sauer's thought that have largely been neglected (for a detailed survey of German geography's broader influence on American geography and vice versa in the 19th and early 20th century, see Hartshorne, 1939a, b). Hence, instead of reading Sauer through the present lens of cultural geography, I turn to past debates in German geography leading up to Sauer's *Morphology*, paying special attention to the question of *areal realism*. In doing so, I reconstruct why Sauer deemed it necessary to turn to phenomenology in particu-

lar for his account of landscape. Reading Sauer's *Morphology* as a response to the problem of areal realism, i.e. if geography's units of analysis (areas, regions, or landscapes) exist or if they are "simply empty silhouettes" (Minca, 2007:190), allows me to suggest Sauerian phenomenology as a paradigm for geographic research. In light of German Theory, Sauer's early work, I argue, attains new and perhaps surprising relevance for present research in cultural geography on (post-)phenomenology (Ash and Simpson, 2016; for a discussion on the absence of phenomenology from present-day German geography, see Hasse, 2017).

## 2 German Theory and the areal-realism debate

I first reconstruct the debate around areal realism in German geography, bringing into focus the geographical (and philosophical) problem Sauerian phenomenology promises to solve. This debate occupied both Anglophone and German geography in the 19th and early 20th century, even as its precise origins are difficult to pin down (for the problem of genealogy in geography, see Mayhew, 2011).

In his *Physical geography*, Kant (2012 [1802]:§2, 446) sought to develop an account of geography as a science. In §4, the basic problem of areal realism makes an appearance: Kant distinguishes between logical and physical science in order to situate geography. Whereas logical science divides knowledge according to concepts, physical science divides knowledge according to time (history) and space (geography). Physical geography, the "geographical description of nature", then "refers to the *places on earth where a thing is actually to be found*... In sum, we are concerned with nature, the earth itself, and those places where things are actually encountered" (Kant, 2012 [1802]:§4, 448, emphasis by author). The question of areal realism concerns the nature of these "places" of geography: are they of the mind or the world?

### 2.1 (Dissecting) earth-individuals

#### 2.1.1 Carl Ritter

In his major geographical work *Erdkunde*, Ritter faced the ontological and epistemological difficulty that areal realism presents geographers with head-on. Ritter's methodological argument proceeds through a number of stages, which take place on the "logical" or "conceptual" side of Kant's dichotomy. In brief, Ritter (1822:10, translation by author) posits the existence of "earth-individuals", such as Europe and Asia, on the basis that historical and geographic destiny is tied to distinct regions. This link between history and geography is not coincidental but necessary – guaranteed by a "higher order" (Ritter, 1822:3–4). What "gave philosophical muscle to Ritter's regional ideology", Livingstone (1993:141) observes,

was the teleological foundation on which the whole edifice rested. To study geography was to explore nothing less than the very laws of the Creator, who was the author of the human story, the architect of the world-plan, and the builder of humankind's earthly home.

Ritter makes the underlying ontological (and theological) assumption of his work most explicit when he discusses his work's "ideal background" (Ritter, 1822:22, translation by author). The truth of his work, Ritter writes, does not rest "in the truth of a concept but in the complete content of all truth for [him], thus in the realm of faith" (Ritter, 1822:23, translation by author). His work fundamentally rests on "an inner perception, which developed out of his life in nature and in the human world" (Ritter, 1822:23, translation by author). The "essence of this *perception*", Ritter goes on to argue, stands "in contrast to the sharp and distinguishing *concept*", given that perception "lends itself more to combination and construction" (Ritter, 1822:23, translation and emphasis by author).

#### 2.1.2 Julius Fröbel

Fröbel (1831, 1832) fundamentally questioned Ritter's comparative geographic approach, taking aim at his concept of earth-individuals, which elided the peculiar character of a region with the concept of individuality. In Fröbel's mind, the "concept of the peculiar character, of the physiognomic or the characteristic is much more fluid than that of individuality" (Fröbel, 1831:50, translation by author). In appealing to character, Fröbel (1831:501) argues that we leave the realm of science and enter into aesthetics: "*Scientifically*... it is first necessary to *develop* the local character of nature in some region on earth's surface out of its particulars" (Fröbel, 1831:502, translation by author), as opposed to taking the character of an area as a given.

Fröbel (1831:501–502) drives this point home by analogising comparative or regional geography to another comparative science, anatomy. According to Fröbel, no physiological insight could be reached by studying individual limbs and their "character" alone. Instead, the anatomist must dissect the body along the systems which spread across it, going against the perhaps "intuitive" units of the body. The anatomist's "disruptive hand of analysis leads, if anything does, to the discovery of life; and if it does not lead there in the highest sense of the word, then this only means that life itself is incomprehensible" (Fröbel, 1831:502, translation by author). What cannot be subjected to analysis, such as Ritter's "inner perceptions", are consequently beyond the boundary of science; they are "aesthetic perceptions which *cannot* be analysed" (Fröbel, 1831:502, translation by author, emphasis in the original). Importantly in light of later arguments for and against areal realism, Fröbel (1831:504, translation by author, emphasis in the original) distinguishes the

*analytic* path of science from Ritter's *synthetic* path, which "proceeds entirely according to the *view of common life*". The connections the latter reveals "can only ever become *perceptible in a painting* but never an *insight in a science*" (Fröbel, 1831:504, translation by author, emphasis in the original).

Turning back to his analogy with anatomy, Fröbel (1831:505) argues that to proceed scientifically and analytically in geography and not according to arbitrary principles, we must not start with vague individual units of analysis vertically (or regionally), but we must study the various geographic phenomena across the earth's surface horizontally (or systematically). We must, for instance, study the systems of hydrology and climatology in much the same way as the anatomist studies the nervous or muscular systems in their totality, as opposed to the nerves and muscles of the arm or leg. Fröbel proposes a more conspicuous point of incision: not vertically through the earth's surface but horizontally along it, dissecting not areal units but the various geographical factors.

Contrasting Ritter's and Fröbel's approach brings into focus the question of whether areal realism is even an object or question of geography as science. By Ritter's own admission, it requires *faith* to follow his work charitably. It is along these lines that Hartshorne (1939a:235) adjudicates Fröbel's critique of Ritter: it was "not an argument but simply a different philosophical assumption of science asserted without foundation". Hartshorne (1939a:236, emphasis by author) goes on to defend Ritter's approach: "In general –, we may say that the teleology in Ritter's geography was an attempt to *interpret philosophically that which science could not explain*". But Hartshorne's defence of Ritter fails to take Ritter at his own word. It was Ritter's explicit goal to turn geography into a "branch of philosophy itself" (Ritter, 1862:14, translation by author), explaining not only the physical composition but also "the higher purpose of earth" (Ritter, 1862:13, translation by author). In his reply to his most vocal critic, Ritter goes so far as to argue that "geography is not pure natural science to me" (Ritter, 1831:517–518, translation by author).

## 2.2 Alexander von Humboldt: an incipient phenomenology of landscape

Aside from Ritter's theological realism and Fröbel's anti-realism, I identify in Humboldt's work, a third proto-phenomenological approach which takes landscapes to be real and expands the boundaries of geography as a "natural science". Humboldt finds in experience itself the unifying principle which will guide his seminal work *Cosmos*. The landscapes Humboldt (1849 [1845]:x, emphasis by author) encountered travelling "could not fail to encourage the *natural tendency of my mind towards a generalisation of views*". This account announces the interdependence of phenomenological experience and scientific knowledge which characterises Humboldt's work.

Reflecting on the experience of nature as a whole, Humboldt (1849 [1845]:2) identifies "an intuitive feeling of . . . order", which "reveals to the soul, by a *mysterious inspiration* [as opposed to Ritter's divine revelation, by author], the existence of laws that regulate the forces of the universe" (Humboldt, 1849 [1845]:3, emphasis by author). Narrowing his focus, Humboldt goes on to identify an enjoyment from the "contemplation of the individual characteristics of the landscape, and of the conformation of the land in any definite region of the earth" (Humboldt, 1849 [1845]:3–4), enjoyment from "the peculiar physiognomy . . . of the land" (Humboldt, 1849 [1845]:4–6).

Encountering someplace unfamiliar, "a physiognomy wholly unknown to us", we "receive new impressions, linked together by a certain secret analogy" (Humboldt, 1849 [1845]:5).

It may seem a rash attempt to endeavour to separate [or dissect, by author], into its different elements, the *magic power exercised upon our minds by the physical world*, since the character of the landscape, and of every imposing scene in nature, depends so materially upon the *mutual relation of the ideas and sentiments* simultaneously excited in the mind of the observer. (Humboldt, 1849 [1845]:5, emphasis by author)

"Humboldt's optimism" (Böhme, 2018:176, translation by author) lies in his philosophical, proto-phenomenological conviction that the unity of landscape and nature – what is secret, mysterious, and magical – emerge from a confluence of nature and mind. Humboldt (1849 [1845]:58–60) here stakes out a path between the rationalist and empiricist approaches to nature of his time, arguing instead for a "thoughtful empiricism" (Bowen, 2009:259) which seeks to balance both by informing and explicating the phenomenological unity of nature and landscape with the help of empirical measurements.

What makes this approach (proto-)phenomenological is the correlational entanglement of subjectivity and objectivity in Humboldt's areal realism (see also Hepach, 2021). The way in which language, for instance, contrasts the "intellectual world" from nature must, in Humboldt's (1849 [1845]:59) view, "not lead us to separate the sphere of nature from that of mind, since such a separation would reduce the physical science of the world to a mere aggregation of empirical specialities." Humboldt goes on to make an argument that is central to phenomenological theory more broadly, namely that

*the external world has no real existence for us beyond the image reflected within ourselves through the medium of the senses*. As intelligence and forms of speech, thought and its verbal symbols, are united by secret and indissoluble links, so does the external world blend almost unconsciously to ourselves with our ideas and feelings. (Humboldt, 1849 [1845]:59, emphasis by author)

Humboldt here appears to extend the unity of concepts, such as “nature” or “landscape”, to include not only the unity of thoughts and words but unity with the external world itself. In experiencing and articulating a landscape, one then gives expression to a unity that is latent in both thought and nature. One’s concepts, such as landscape, are consequently not “in one’s head” but part of the (external) world itself (see also Figal, 2019).

Landscape painting is of interest to Humboldt as it serves as a model for his phenomenological approach (see also Kwa, 2005). Both the geographer and the landscape painter – “delineators of nature” (*ordnende Denker*), each in their own way – must “resist the tendency towards endless division, in order to avoid the dangers presented by the very abundance of our empirical knowledge” (Humboldt, 1849 [1845]:63). As Humboldt (2011 [1806]) explains in his previous work, “Ideas for a Physiognomy of Plants”, from which this section of the *Cosmos* heavily draws, those who “are capable of surveying nature with a comprehensive glance and abstract their attention from local phenomena”, such as landscape painters, “cannot fail to observe” that every zone

has its own distinctive character. The primaeval force of organization . . . binds all animal and vegetable structures to fixed ever-recurring types. For as in some individual organic beings we recognise a definite physiognomy, and as descriptive botany and zoology are, strictly speaking, analyses of animal and vegetable forms, so also there is a certain *natural physiognomy peculiar to every region of the earth*. (Humboldt, 2011 [1806]:217, emphasis by author)

A landscape’s distinct physiognomy does not result from empirical measurements but from a phenomenological attitude which apprehends the latent character or form cohering said landscape. In *Cosmos*, Humboldt states more clearly that this physiognomy is the

total impression produced by the aspect of any particular region. To apprehend these characteristics, and to reproduce them visibly, is the province of landscape painting; . . . it is permitted to the artist . . . to resolve beneath his touch the great enchantment of nature. (Humboldt, 1849 [1847]:456)

What the artist resolves in their work is precisely the tension between individual objects of description and conceptual unity in thought. Humboldt’s (2011 [1806]:219–220) particular interest in plants arises from the fact that it is “the vegetable covering of the earth’s surface which chiefly conduces to the effect” of the physiognomy of an area. The “objective”, physical constitution of a landscape and the “subjective”, perceptual abilities of humans meet on the scale of vegetal life; “inner” and “outer” perception, to extend Ritter’s (1822:23) turn of phrase, meet “eye to eye”.

In drawing on landscape painting, Humboldt carves out an approach to areal realism that responds to both Ritter’s and Fröbel’s critique. Questioning Fröbel’s distinction between science and aesthetics, Humboldt argues that the physiognomic and characteristic are not subjectivistic projections of the human mind onto nature; they are not immune to analysis. Where Fröbel argued that areal units “can only ever become perceptible in a painting but never an insight in a science” (Fröbel, 1831:504–505, translation by author), Humboldt argues the opposite: the physiognomy and character of a landscape, which landscape paintings foreground, not only are open to analysis but also form the very basis for the scientific comprehension of unity in nature. Böhme (2018:176, translation by author) hence calls Humboldt’s approach an “objective aesthetics”: “Physiognomy is another word for the aesthetics of nature” (Böhme, 2018:176, translation by author).

Briefly situating the arguments so far in the present, Humboldt’s approach responds to “the core problem” in the study of regions as outlined by Cresswell (2013:59), namely “the tension between the universal and the specific”. A study of the uniqueness of regions appears to contradict, at first glance, science’s claim to uncover universal laws. However, Humboldt’s and, as I show below, Goethe’s and Sauer’s scientific projects sought to resolve this tension between the specific and the universal which haunts the study of both regions and landscapes. They reveal, as phenomenology does more broadly, the universal *in* the specific: the underlying rules governing the cohesion at the heart of a region’s and landscape’s areal realism.

### 2.3 Alfred Hettner: areal realism as mysticism

By way of concluding my account of the geographic developments around the question of areal realism which led up to Sauer’s *Morphology*, I now turn to Hettner’s work, which, through Hartshorne’s (1939a, b) rendering, has proven to be influential for geography’s understanding of regions up until today (for Hartshorne’s incomplete understanding of Hettner, see Harvey and Wardenga, 2006).

Starting with a shared concern, both Humboldt and Hettner sought to unify horizontal–vertical and systematic–regional approaches to geography. Where Humboldt argued for the unity of nature on various scales, the physiognomic and characteristic expression of which we can experience, Hettner was decidedly sceptical. Although Hettner at one point entertained the idea that geography’s object of study should be “the inner *essence* of regions, landscapes, and areas” (Hettner, 1927:129, translation by author, emphasis in the original) – which has led some to consider Hettner an areal *realist* with a corresponding “pre-modern concept of area” (Werlen, 1993:246, translation by author) – he would later argue that the assumption that areal units are “independently given” would be nothing short of “mysticism” (Hettner, 1934:143, translation by author). Instead, “they only re-

sult from the being together and acting together of different factors; they are secondary” (Hettner, 1934:143, translation by author).

Some greater piece of the earth's surface is then only unitary in *one* respect, in others multiple, and, in the strictest sense, only the individual point on earth [*Erdstelle*] has complete uniqueness and individuality. There is and there can be no universally valid... classification of the earth. (Hettner, 1934:143–144, translation by author)

Given that the discipline of geography can thus not be grounded in a distinct geographical *object*, such as regions or landscapes, Hettner (1927:114) argues, drawing on Comte, that geography is unique amongst the sciences due to its chorological *perspective*. Geography studies the earth's surface concerning “areal differentiations and relations” (Hettner, 1905:557). Delimiting areal units is then, as Hettner (1934) concludes later, not a practice of identifying “real” regions and landscapes but rather an artefact both of the history of geography and of the practice of chorological study.

Contrasting Hettner's approach with Humboldt's brings into focus the key onto-epistemological problem that a phenomenological approach to areal realism – Sauerian phenomenology – answers to: for Hettner, experiences of unity concerning area, region, and landscape must be illusory because “primary” reality consists in the individual geographical factors. Taking landscapes to be real is then to mistake a thought, an “idea”, for an “object” (Cresswell, 2013:60).

However, defining primary reality in this way is “not an argument but simply a different philosophical assumption of science asserted without foundation” (Hartshorne, 1939a:235). Phenomenological theory takes aim at attempts to reify and universalise the scientific method in this way (Husserl, 1970). By contrast, Humboldt's proto-phenomenological approach to landscape surfaces a phenomenological experience that underlies the scientific method.

#### 2.4 Johann Wolfgang von Goethe: phenomenological morphology

Concluding this section with a “non-geographer”, I turn to Sauer's likely earliest encounter with German Theory, Goethe, who is later cited as a major influence in *Morphology*. This dense discussion of Goethe's phenomenology of the concept and phenomenological morphology is meant to finally pierce the “aura of impenetrability” which “has always surrounded ‘The Morphology of Landscape’ in English-speaking countries” (Penn and Lukermann, 2003:234).

Although Goethe's work pre-dates the inception of phenomenology as a philosophical discipline, he too sought to develop an approach to natural science founded on experience. “Goethe's method of the observation of nature is”, as Figal highlights, “literally phenomenological: it is study of appearances” (Figal, 2014:239, translation by author). Neither Goethe nor Humboldt sought to reveal some secret, underlying essence beyond the phenomena we experience in their physiognomic work (Böhme, 1999:98, 101). “The specific is”, instead, “a presentation of the abstract, its symbolic expression” (Hühn, 2020:144, translation by author). Like Humboldt and as opposed to Ritter, Goethe then “saw no inherent conflict between experience and idea or between fact and conception” (Seamon, 2005:4). This is the onto-epistemological basis for Goethe's maxim, to which Sauer will return, that “[o]ne need not seek anything beyond the phenomena; they themselves are the theory” (Goethe, 1953:432, translation by author). In their physiognomic work, Goethe and Humboldt hence sought to analytically reconstruct how “total impressions of nature” constitute themselves. Physiognomic description is not concerned with the description of minute details but, much like phenomenology itself, with the “general” and “typical” (Böhme, 1999:100, translation by author), i.e. with the *eidetic*, salvaging concepts from experience.

To understand what is at stake in Sauer's morphology, one must clarify the nature of concepts thus salvaged. Evidently, as Humboldt's approach exemplified, they do not simply appear to emerge from the mind. In his comprehensive discussion of Goethe's term “concept” (*Begriff*), Muenzer (2021) distinguishes the practice of conceptualising from defining.

That is to say, driven by the affect of amazement (*Erstaunen*), the searching mind invents concepts. And even if no single word or phrase will ever adequately capture (*erfassen*) and comprehensively contain the essence of things in traditional definitions, there is a special moment (*Aperçu*) of intuitive understanding (*Anschauung*) for Goethe that, according to his phenomenology of the concept, facilitates philosophical seeing by collecting and organizing all the conceptual attempts, or *Versuche* (experiments), to understand things in terms of their emergence (*Erscheinung*) through time. (Muenzer, 2021:25, emphasis in the original)

Concept is a “*paradoxical* figure of thought” because it “finds itself lured to define its own borders” whilst these borders themselves open onto “transitional zones of reconceptualization” (Muenzer, 2021:25).

As a figure of thought, “concept” mirrors the problem “area”, “region”, and “landscape” faced in geographic description. A concept, for Goethe, does not define a distinct, concrete, or exact object. Instead, concept contains “an *infinite* number of past and further modifications, or finite concrescences, of its own cognitive power” (Muenzer, 2021:25).

To understand something conceptually means to not limit it “to any of its individual modifications or material expressions” and to acknowledge “that the ontological pursuit of things in their essence cannot be limited by the requirement of concepts within separate disciplines . . . for clarity and stability” (Muenzer, 2021:25).

In contrast to what is asked of scientific concepts by Ritter (1822), Fröbel (1831), and Hartshorne (1939a), Goethe's concept undermines

the reliance of orthodox philosophical systems on logical and stable properties like the “particular” or the “universal,” which must be attributable to and predicable of things, if they are to become legitimate objects of ontological and epistemological reflection. By contrast, *Begriff* [concept] privileges force fields of philosophical activity and discovery with fluid and permeable borders that . . . work intuitively within the living world. (Muenzer, 2021:25, emphasis in the original)

Landscape, understood as a Goethian concept, then cannot be defined in analytical terms with universal rules of areal incision because, as a concept, it itself “exists in a state of perpetual becoming” (Muenzer, 2021:25).

Goethe's “concept” is closely related to *form*, the object of morphology in the Humboldtian, Goethian, and Sauerian sense, as form itself is “a lawful process of formation actualized in an interplay of invariance and variation. Form thusly conceived is a genesis from within, a self-shaping governed by an inner principle” (Wellbery, 2021:46).

In agreement with Humboldt's phenomenologically realist understanding of landscape as a concept between mind and nature, Goethe's concept “as a thought object of experience” is not a product of the mind but “resides in the phenomenal world and is animated from within by its own elusive governing rule” (Muenzer, 2021:27; see also 37). Clarifying a concept, such as landscape, then is not only about understanding what we *mean* by landscape, but also about what landscape *is*. The conceptual realm is not of the mind but of the world geographers seek to describe.

Although concepts are fluid and open to revision, they are not arbitrary or immune to analysis. As Humboldt and Sauer show, the “elusive governing rule”, the form of a landscape, is the very starting point for scientific inquiry. To uncover the “rule that regulates the flow of [a concept's] fugitive appearances” (Muenzer, 2021:27) is, consequently, the task of a morphological, physiognomic, phenomenological science.

Crucially, for Goethe, this conceptual work does not belong outside of science but at its heart. Goethe envisions a science that “perpetually *tests* and *tries* to express the inefable rule of its own conceptualisation [of forms, by author], understood as a process of progressive emergence and increasing self-awareness” (Muenzer, 2021:33, emphasis in the original). Hence to critique areal realists for being unable to provide an exact definition of their object misses the point

of a phenomenological or morphological approach to geography: its objects are not clearly delineated objects but forms given in tensions, in conceptual “force fields” between mind and world which can, at best, be articulated in degrees of clarity and intensity (Figal, 2007). It is unsurprising then that Muenzer's (2021:28) description of conceptual work mirrors the geographical work of capturing landscapes.

Rhythmically alternating on its journey of self-perfection between systolic moments of clear focus that hold onto objects by delimiting them in thought and an unbounded exploration of the diastolic process that generates them in the first place, *Begriff* [concept] finds its ontological place in a force field of pure liminality between things that are observable and are not. (Muenzer, 2021:28)

The practices of philosophical (conceptual) and geographical (areal) work meet in this struggle of delimitation. A phenomenological geography does not have a static view of primary objects as the basis for understanding geographical reality: it also encompasses those phenomena (areal units) perpetually in process. This approach undoes “the certainty of [landscape's] representation that has allowed for the separation of subject and object in Modern geography . . . still with us”, which Minca (2007:191) observes as the ultimate fruition of Humboldt's landscape concept. Equally, it questions geographic critiques of phenomenology as being caught up in “dreams of presence” (Rose, 2006), as systolic moments make way for diastolic ones.

### 3 Sauerian phenomenology

As promised in the Introduction, this final section will offer an alternate, German-theory reading of Sauer's *Morphology*: reading a Sauerian phenomenology that was never written (Benjamin, 2002:416; for a similar approach, see also Entrikin 1984; Korf, 2021). My interpretive pivot for this speculative reading of Sauer's work is the problem of areal realism I reconstructed above. Sauer, I argue, had his finger on a deep onto-epistemological problem in his *Morphology*, a problem to which phenomenology holds the answer, as Sauer correctly identified. However, Sauer did not appear to be interested in formulating a comprehensive, philosophical position; Sauer was a “philosopher in spite of himself” (Entrikin, 1984). Caught in this tension, *Morphology*, in the words of Penn and Lukermann (2003:238), does not resemble “a study that moves toward an architectonic vision of reality” but rather “ought to be read as a source book of geographical issues – a compendium of insights and sketches of problems and their possible solutions”.

#### 3.1 Sauer: cultural geographer or phenomenologist?

According to one canonical reading, Sauer's legacy lies in founding “classical cultural geography” and the so-called

Berkeley School (Gibson and Waitt, 2009:413). *Morphology* is tied into this narrative due to Sauer's critique of "environmental determinist thinking" (Williams, 2009a:16), emphasising culture as a shaping force, as opposed to something shaped by nature. This reading of Sauer has in turn led to him being labelled as a "superorganicist" and "cultural determinist" (Gibson and Waitt, 2009:413), turning culture into a "mode of explanation... which reifies the notion of culture assigning it ontological status and causative power". This perspective, Duncan (1980:182) argues, "was adopted by Carl Sauer as a result of his association with Kroeber and Lowie at Berkeley in the twenties and thirties and was subsequently passed on to his students", an argument which Solot (1986:511) has called "overdrawn".

However, a different, German-theory perspective on *Morphology* resists this culturalist reading. Although *Morphology* "has been taken by some as the hallmark statement of the Berkeley School" (Williams, 2009b:301), influenced by the Berkeley anthropologists Kroeber and Lowie (Duncan, 1980:182), Kenzer (1985:259) has questioned the influence of Kroeber and Lowie on the text (see also Kenzer, 1987:470). Furthermore, Leighly (1976:340) – with whom Sauer published a syllabus which closely resembles *Morphology* (Sauer and Leighly, 1925) – highlights how Sauer "emphatically deprecated and disavowed the views he set forth in the 'Morphology'" later in his career (see also Kersten, 1982:69). *Morphology* was "not the plot of a new course" to follow but rather the "terminus of Sauer's mental development at Ann Arbor" (Leighly, 1976:340), where he taught before his move to Berkeley, making *Morphology* a strange foundational text for future research.

Changing perspective, the main body of *Morphology* itself starts with the programmatic statement that "[a]ll science may be regarded as phenomenology" (Sauer, 1925:20). Sauer's turn to phenomenology is motivated by his critique of environmental determinism too (James, 1981; Kersten, 1982). To assume that environment determined culture was, in Sauer's eyes, "to accept a single dogma" (James, 1981:320) which threatened to prejudice the geographer's work in the field. Having previously published an overview of his approach without the mention of phenomenology (Kersten, 1982:61; Sauer, 1924), *Morphology* introduces phenomenology for its critique of *theory-ladenness*. Phenomenology provided the epistemological foundation for Sauer's morphologic method, which "rests upon a deliberate restraint in the affirmation of knowledge" (Sauer, 1925:31). This explains, in part, why Sauer himself did not develop a substantive, phenomenological approach to geography. In Sauer's eyes, phenomenology is not so much a productive method as a critical tool with which to wipe geography clean of theory. It is, perhaps, for this reason that Sauer is not generally remembered for his phenomenology.

A German-theory reading of *Morphology* reveals what is nonetheless unique and remarkable about Sauer's approach, namely that he applies his method to both physical and hu-

man and/or cultural geography. In extrapolating from *Morphology*, a Sauerian phenomenology may help correct the subjectivist bias in geography's later appropriation of phenomenology in humanistic geography and, more recently, in post-phenomenology (see Dörfler and Rothfuß, 2018; Seamon and Larsen, 2020; Hepach, 2021).

### 3.1.1 *Morphology*: a phenomenological reading

*Morphology* itself starts with a programmatic introduction sympathetic to the aims of German Theory. Sauer (1925:19) asks the reader to "reexamine the field of geography" in light of American and European geography drifting apart. Nothing less than the illumination "in some degree [of] both the nature of the objective and the problem of systematic method" is Sauer's (1925:19) aim, "keeping current views abroad especially in mind".

The first section of the main body of *Morphology* is titled "The phenomenological view of science" and begins as follows:

All science may be regarded as phenomenology, the term science being used in the sense of organized process of acquiring knowledge, rather than in the common restricted meaning of a unified body of physical law. (Sauer, 1925:20)

Complicating any interpretation of Sauerian phenomenology, Sauer cites, as the source of his concept of phenomenology, the writings of Keyserling (1910), who was himself not part of the phenomenological tradition proper. Sauer took a phenomenological approach to mean the interrogation of the very nature of the objects of geographic study on the basis of experience. To "illuminate in some degree both the nature of the objective and the problem of systematic method" (Sauer, 1925:19) in geography, one must first (i) clarify "the phenomena that constitute the 'section of reality' which is occupied by geography", in order to then (ii) develop "a method of determining their connection" (Sauer, 1925:20). The question of areal realism decides itself depending on how these questions are answered.

Where Kant (2012 [1802]) and Hettner (1934) sought to deduce the "primary subdivisions of knowledge" (Sauer, 1925:21) according to philosophical or methodological principles, Sauer (1925:20–21) instead pursues a phenomenological approach closer to the work of Humboldt and Goethe, arguing that the "experience of mankind, not the inquiry of the specialist, has made the primary subdivisions of knowledge". Botany studies plants and geology rocks because "these categories of fact are evident to all intelligence that has concerned itself with the observation of nature". Analogously, "area or landscape is the field of geography, because it is a naïvely given, important section of reality, not a sophisticated thesis".

This "popular definition" (Sauer, 1925:21) of geography as chorology, the study of areal units, then rests on the "uni-

versality and persistence of the chorologic interest and the priority of claim which geography has to this field". Here, Sauer (1925:21–22) cites and agrees with the early work of Hettner (1923), before his unequivocal critique of areal realism was published a decade later. The later Hettner would, arguably, instead agree with the adherents "of other, recent schools of geography" which "deem this naïvely given body of facts inadequate to establish a science" (Sauer, 1925:22).

In line with the other morphological approaches introduced so far, Sauer (1925:22, emphasis by author) draws attention away from "the phenomenal *content* to the nature of the *connection* of the phenomena". The "significant reality" of landscape is then based on the "chorologic relation", i.e. that the "phenomena that make up an area are not simply assorted but are associated, or interdependent" (Sauer, 1925:22). Geography, according to Sauer (1925:22), should dedicate itself to studying this relation until or unless "the non-reality of area" is shown.

Sharing Humboldt's "optimism", Sauer (1925:25, emphasis by author) calls for the "establishment of a critical system which embraces the *phenomenology of landscape*". A landscape "constitute[s] a reality as a whole" (Sauer, 1925:25); it is "an area made up of a *distinct association of forms*, both physical and cultural" (Sauer, 1925:26, emphasis by author). Citing Bluntschli (1921:49), who in turn cites Humboldt as an inspiration for his work, Sauer (1925:26) argues that "one has not fully understood the nature of an area until one 'has learned to see it as an organic unit, to comprehend land and life in terms of each other'".

Sauer (1925:30) traces his approach back to Goethe, with whom the "term 'morphology' originated" (see also Kenzer, 1985; Penn and Lukermann, 2003). As discussed previously, Sauer (1925:30) emphasises that Goethe "was interested in the nature and limits of cognition", which become evident in his understanding of "concept" and "form". His "form studies", Sauer (1925:31) goes on to explain, originated from the aforementioned insight that "one need not seek anything beyond the phenomena; they themselves are the theory" (Goethe, 1953:432, translation by author).

Sauer (1925:26) justifies this extensive theoretical discussion as a way of clearly distinguishing his approach from physiography and the anthropogeography "of the school of Ratzel", with its claims of "environmental influence", both of which are theory-laden. Instead, Sauer (1925:30) turns to *morphology* as a method for investigating landscape which suppresses "a priori theories". Like Humboldt and Goethe before him, Sauer (1925:30) holds that a morphological approach only assumes that a landscape has a "structure" consisting of "forms". The morphological approach "rests upon a deliberate restraint in the affirmation of knowledge"; it "presupposes a minimum of assumption; namely, only the reality of structural organization" (Sauer, 1925:30; see also Sauer, 1924:18–19). Humboldtian, Goethian, and Saurian morphology assume nothing apart from the fact that there

are structures, rules, or patterns inhering in reality to be expressed.

So how does Sauer account for the morphology of landscape? Sauer (1925:41) first turns to the structural organisation of "natural landscape", which "becomes known through the totality of its forms". These forms are climate, land, sea and coast, and vegetation. In calling these geographic factors forms, Sauer works against the tendency of "systematic geography" discussed above to study these elements in relative isolation. Instead, these forms are not to be thought of "for and by themselves, as a soil specialist would regard soils, for example, but in their relation to one another and in their place in the landscape, each landscape being a definite combination of form values" (Sauer, 1925:41). These forms are in turn not static. They are shaped, over time, by geognostic, climatic, and vegetational factors and, mysteriously, by an "X" factor too. Importantly, these factors are not "the end of inquiry" for Sauer's morphology, but instead they "are justified as a device for the connection of the forms" (Sauer, 1925:41). Shaped by these factors, the forms interlink into a processual landscape, affording the possibility of in turn interlinking with human culture and its ongoing development in a cultural landscape. The forms of natural landscape then constitute the *medium* for humankind to express its own (cultural) forms in a given area. To adapt to a given landscape means to recognise that within "the wide limits of the physical equipment of area lie many possible choices for man" (Sauer, 1925:46).

Goethe's phenomenology of the concept helps us grasp the complicated ontological nature of the forms Sauer introduces here. These forms are not static objects or ideas of the mind but akin to the force fields introduced earlier. They are not simply the sum of their (geographical) parts, nor can they be explained genetically alone. Celebrating Köppen's "trials at climatic synthesis", Sauer (1925:33) highlights his restraint from applying "genetic explanation": "Climatology has been phenomenologic rather than genetic" (Sauer, 1925:33). Contrasting climate as "areal reality" and meteorology as "general process" (Sauer, 1925:42) brings into focus the type of geographic experience Sauer is trying to surface: attentive to the nature and character of an area, as opposed to its individual parts and fleeting appearances.

Reading what was never written, Sauerian phenomenology and its areal realism conceive of landscape as the interrelation of these forms on the basis of everyday experience. The reality of Sauerian landscapes is then not based on some universal principle with which all landscapes could be delineated from each other. Instead, this areal realism is based, in view of the German Theory introduced above, on the recognition of mind's and nature's intertwinement in the unity of concepts/forms through which areal units, such as landscape, find their expression. As Goethe's phenomenology of the concept made evident, these forms are not simply present in experience as objects. They are given in tensions, in systolic and diastolic moments, receding into the background of ex-



perience until they are brought to the foreground by careful phenomenological attention. Where Fröbel's, Hettner's, and Hartshorne's approaches to areal realism took as their starting point a cartographic perspective from above, imagining themselves looking at a map of different geographical factors and attempting to make the "right" areal incision, Sauerian phenomenology approaches landscapes from *within* (for a more recent approach to landscape from within, see also Ingold, 1993; Wylie, 2005).

Returning to what Sauer (1925:48) himself wrote, he concluded *Morphology* by pivoting away from the German Theory on which much of his approach rested. Returning back to Fröbel's line of argument, Sauer (1925:48) cites Humboldt's "physiognomy" of landscape as a geographic approach that lies "beyond science". Although Sauer (1925:48) recognises that the "best of geography has never disregarded the aesthetic qualities of landscape, to which we know no approach other than subjective", it is clear that he sees his own approach as being, in contrast, "scientific" or "objective". It is difficult to square, as a phenomenological interpreter of *Morphology*, this critique of the "subjective" with the very origin of the concept of form, according to Sauer himself, in reality as it is "naïvely given" and historically in Goethe's phenomenological science. In a manner of speaking, Sauer appears to "throw away the [phenomenological, by author] ladder after he has climbed up it" (Wittgenstein, 2001 [1922]:6.54).

As I hope to have shown, however, Sauer's significant contribution to the debate around areal realism is (or could have been) the recognition of the phenomenological reality of landscape, of areal units for geography *as a science*, even though he himself "seemed little concerned with the logical foundations of such areal concepts" (Entrikin, 1987:78). Instead, Sauer draws a line between his scientific work and the "subjective" work of Humboldt, Ewald Banse, Wilhelm Volz, and Robert Gradmann. With the drawing of this line, the possibility of a phenomenological science is once more crossed out: the phenomenological road Sauer stakes out in his *Morphology* based, in part, on German Theory ends abruptly. In a footnote, Sauer (1925:48) leaves such work to, amongst others, the fascist geographer Banse, who "has been publishing since 1922 a non- or antiscientific journal, *Die Neue Geographie*, in which numerous good items are enclosed in a repellent polemic shell".

#### 4 The dangers of areal realism

Sauer's allusion to Banse indicates the obvious dangers of areal realism. When an area, region, or landscape becomes reified in such a way that it is said to include or express the essence of a certain people or culture, areal realism can be construed as the foundation of exclusionary, racist, and fascist politics, of "evil geographies" (Keighren, 2018:772). Unsurprisingly then, geographers in particular have struggled

with this flavour of areal realism. Under the heading of "environmental determinism", the question of to what extent one is influenced and shaped by one's environment has been discussed extensively (for an overview, see Livingstone, 2011). German geography and theory bear particular culpability, as geographic concepts, such as Ratzel's (2018 [1901]) *Lebensraum*, served as the "scientific" foundation of Third Reich politics (for an overview, see Giaccaria and Minca, 2016). In his work on biogeography, Ratzel (2018 [1901]:72) – "the grandfather of German *Geopolitik*" (Bassin, 1987a:116) – extrapolated a "struggle for space" from Darwin's "struggle for life", which would later play into the Third Reich's politics of expansion and extermination through a concern for securing "Lebensraum" (for detailed discussion of how Ratzel's geographical theory undermines Nazi ideology, see Bassin, 1987a, b; Abrahamsson, 2013). In Anglophone geography, Ratzel's work became a major influence through its reception by Semple (1911).

Sauer was not an areal realist of this flavour. For the purposes of the Sauerian phenomenology developed in this article, it is particularly important to recognise that Sauer employed phenomenology to *counteract* the determinist construal of areal realism. What made his approach phenomenological was, in Sauer's own understanding, the fact that he refrained from such theoretical speculation and extrapolation. Hence his distancing from "the school of Ratzel" (Sauer, 1925:26; see also Sauer, 1971:245). Sauer was deeply sceptical about the hypostatisation of genetic theories to explain the nature of a landscape, in particular with respect to geomorphology, "environmentalism" (Sauer, 1925:52), and climatology. Sauer's natural landscape does not determine culture, nor does landscape somehow express the essence of a people. Instead, natural landscape presents "wide limits" (Sauer, 1925:46) for people's self-expression.

#### 5 Conclusions

By way of concluding, I want to briefly reflect on the role of areal realism in German geography following Sauer. Given the trajectory areal realism took in Germany specifically, it is unsurprising that the study of regions (*Länder*) and landscapes (*Landschaften*) was met with great suspicion. The 1969 Congress of German Geographers in Kiel is held by many to be the moment (West) German geography parted ways from an interest in areal realism (for an overview of this debate, see the collection of responses in this journal edited by Korf, 2014; Korf and Wardenga, 2021). As Schultz (2018:8) summarises, a group of young geographers in Kiel called out the unscientific nature and societal irrelevance of geography which sought to study the entanglement of nature and culture in space. Instead, they influentially called for a clear separation of physical and human geography. The reality of area came to be seen as a dangerous ideology (Schultz, 2018:9). Schultz (2002:374, translation by

author) himself has highlighted the danger of “the chorological reification of social matters of fact”, i.e. when social constructs are taken to be “natural” parts of an area. Returning to anatomical analogies one last time, Schultz (2002:376, translation by author) compares the work of the “classical [German] geographer” of the 19th and 20th century to that of a “chiromancer”, who draws lines onto a map in order to read from them the fate of nations, just as the chiromancer reads one’s individual fate from the lines on the palms of one’s hands.

In his reflection on Kiel 1969, Hasse (2014:310, translation by author) however argues that the study of regions and landscapes was abandoned not so much for scientific reasons as due to “political and historical circumstances”. The ironic consequence of the rationalism that dominated human geography as a social science in the wake of Kiel 1969 was, according to Hasse (2014:311), that this theory bracketed important aspects of human experience, rendering it irrelevant too.

The social scientific theory born out of the Kiel Geography Conference’s spirit of criticism in 1969 distracts from those aspects of human life which cannot be explained through constructivism. It distracts from the power of the aesthetic; from the power of emotions; from the power of intuition; and, last but not least (lastingly overshadowed by the critique of geodeterminism), from the power of natural processes which cannot be reached or touched by any sort of discourse. (Hasse, 2014:312, translation by author)

Sauer, I have argued throughout this paper, faced, much like the (West) German geographers of Kiel 1969, the problem of areal realism. However, instead of “throwing the baby out with the bathwater” (Leser, 2014:120, translation by author), Sauer attempted to sketch out a phenomenological, areal realism. The Sauerian phenomenology developed in this article sought to further spell out the latent potential of Sauer’s thought by embedding it more deeply in German Theory. It drew out how a renewed phenomenological approach to physical *and* human geography, through a re-reading of Humboldt’s and Goethe’s work as a proto-phenomenology, can account for aesthetic, emotional, intuitive, *and* natural processes. Although much current research in geography is dedicated to these aspects of experience and nature, Sauerian phenomenology brings into focus how changes to the physical geography of an area are entangled with changing human geographies on a phenomenological level. This perspective is of particular relevance for making sense of experiencing changing climates, as one form of areal reality. Future research is needed to better understand the political dimensions of Sauer’s thought, as well as of the German theorists who influenced him.

**Data availability.** No data sets were used in this article.

**Competing interests.** The author has declared that there are no competing interests.

**Disclaimer.** Publisher’s note: Copernicus Publications remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

**Acknowledgements.** I would like to thank the “German theory” theme issue coordinators – Benedikt Korf and Eberhard Rothfuß – as well as the editor Nadine Marquardt for their valuable editorial support and guidance. I am equally grateful for the anonymous reviewers’ comments which helped shape the final article. I also thank Mike Hulme, Matthew Gandy, Derek McCormack, and the members of the Geographies of Knowledge Research Group at Cambridge, who guided my doctoral research at different stages and encouraged me to write this piece.

**Financial support.** This research has been supported by the Arts and Humanities Research Council (grant no. AH/L503897/1) and the Cambridge Trust.

**Review statement.** This paper was edited by Nadine Marquardt and reviewed by two anonymous referees.

## References

- Abrahamsson, C.: On the genealogy of Lebensraum, *Geogr. Helv.*, 68, 37–44, <https://doi.org/10.5194/gh-68-37-2013>, 2013.
- Ash, J. and Simpson, P.: Geography and post-phenomenology, *Prog. Human Geogr.*, 40, 48–66, <https://doi.org/10.1080/2373566X.2018.1543553>, 2016.
- Bassin, M.: Race contra space: the conflict between German Geopolitik and National Socialism, *Polit. Geogr. Quart.*, 6, 115–134, [https://doi.org/10.1016/0260-9827\(87\)90002-4](https://doi.org/10.1016/0260-9827(87)90002-4), 1987a.
- Bassin, M.: Imperialism and the nation state in Friedrich Ratzel’s political geography, *Prog. Hum. Geogr.*, 11, 473–495, <https://doi.org/10.1177/030913258701100401>, 1987b.
- Benjamin, W.: *The Arcades Project*, Harvard University Press, Cambridge, MA, London, ISBN 9780674008021, 2002.
- Bluntschli, H.: Die Amazonasniederung als harmonischer Organismus, *Geogr. Z.*, 27, 49–67, 1921.
- Böhme, G.: Die Physiognomie einer Landschaft, *Geogr. Z.*, 87, 98–104, 1999.
- Böhme, H.: Ästhetik, in: Alexander von Humboldt – *Handbuch: Leben–Werk–Wirkung*, edited by: Ette, O., Metzler, Stuttgart, 176–182, ISBN 9783476045218, 2018.
- Bowen, M.: *Empiricism and Geographical Thought*, Cambridge University Press, Cambridge, ISBN 9780521105590, 2009.
- Chakrabarty, D.: *Provincializing Europe: postcolonial thought and historical difference*, Princeton University Press, Princeton, NJ, ISBN 9780691049083, 2000.

- Cresswell, T.: *Geographic thought: a critical introduction*, John Wiley & Sons, Chichester, ISBN 9781405169400, 2013.
- Dörfler, T. and Rothfuß, E.: *Lebenswelt, Leiblichkeit und Resonanz: Eine raumphänomenologisch-rekonstruktive Perspektive auf Geographien der Alltäglichkeit*, *Geogr. Helv.*, 73, 95–107, <https://doi.org/10.5194/gh-73-95-2018>, 2018.
- Duncan, J. S.: *The Superorganic in American Cultural Geography*, *Ann. Assoc. Am. Geogr.*, 70, 181–198, 1980.
- Entrikin, J. N.: Carl O. Sauer, philosopher in spite of himself, *Geogr. Rev.*, 74, 387–408, 1984.
- Entrikin, J. N.: Archival Research: Carl O. Sauer and chorology, *Canad. Geogr.*, 31, 77–79, 1987.
- Figal, G.: Modelle und Intensitätsgrade, *Deutsch. Z. Philos.*, 55, 669–677, <https://doi.org/10.1524/dzph.2007.55.5.669>, 2007.
- Figal, G.: Gestalt und Gestaltwandel: Morphologie bei Jünger und Goethe, in: *Morphologie und Moderne: Goethes 'anschauliches Denken' in den Geistes- und Kulturwissenschaften seit 1800*, edited by: Maatsch, J., de Gruyter, Berlin, Boston, MA, 233–244, ISBN 9783110372120, 2014.
- Figal, G.: *Philosophy as Metaphysics*, Mohr Siebeck, Tübingen, ISBN 9783161575778, 2019.
- Fröbel, J.: Einige Blicke auf den jetzigen formellen Zustand der Erdkunde, *Annalen der Erd-, Völker- und Staatenkunde*, 4, 493–506, 1831.
- Fröbel, J.: Ueber die Unterscheidung einer Erdkunde als eigentlicher Naturwissenschaft und einer historischen Erdkunde, *Annalen der Erd-, Völker- und Staatenkunde*, 6, 1–10, 1832.
- Giaccaria, P. and Minca, C. (Eds.): *Hitler's Geographies*, University of Chicago Press, Chicago, IL, ISBN 9780226274423, 2016.
- Gibson, C. and Waitt, G.: Cultural Geography, in: *International encyclopedia of human geography*, edited by: Kitchin, R. and Thrift, N. J., Elsevier, Amsterdam, Oxford, 411–424, ISBN 9780080449111, 2009.
- Goethe, J. W. V.: *Schriften zur Kunst. Schriften zur Literatur. Maximen und Reflexionen*, vol. XII, Christian Wegner, Hamburg, ISBN 9783406084928, 1953.
- Hartshorne, R.: The nature of geography: A critical survey of current thought in the light of the past, *Ann. Assoc. Am. Geogr.*, 29, 173–412, 1939a.
- Hartshorne, R.: The nature of geography: a critical survey of current thought in the light of the past (conclusion), *Ann. Assoc. Am. Geogr.*, 29, 413–658, 1939b.
- Harvey, F. and Wardenga, U.: Richard Hartshorne's adaptation of Alfred Hettner's system of geography, *J. Hist. Geogr.*, 32, 422–440, <https://doi.org/10.1016/j.jhg.2005.07.017>, 2006.
- Hasse, J.: Wenn Utopien zu Mythen werden, *Geogr. Helv.*, 69, 309–312, <https://doi.org/10.5194/gh-69-309-2014>, 2014.
- Hasse, J.: Die Abwesenheit der Phänomenologie in der deutschen Humangeographie, *Geogr. Helv.*, 72, 351–360, <https://doi.org/10.5194/gh-72-351-2017>, 2017.
- Hepach, M. G.: Entangled phenomenologies: Re-assessing (post-)phenomenology's promise for human geography, *Prog. Hum. Geogr.*, 45, 1278–1294, <https://doi.org/10.1177/0309132520987308>, 2021.
- Hettner, A.: Das Wesen und die Methoden der Geographie, *Geogr. Z.*, 11, 545–564, 1905.
- Hettner, A.: Methodische Zeit- und Streitfragen, *Geogr. Z.*, 29, 37–59, 1923.
- Hettner, A.: Die Geographie: Ihre Geschichte, ihr Wesen und ihre Methoden, Ferdinand Hirt, Bresslau, 1927.
- Hettner, A.: Der Begriff der Ganzheit in der Geographie, *Geogr. Z.*, 40, 141–144, 1934.
- Hühn, H.: Morphologie: Johann Wolfgang von Goethe, in: *Handbuch Ontologie*, edited by: Urbich, J. and Zimmer, J., Metzler, Berlin, 143–147, ISBN 9783476046376, 2020.
- Humboldt, A. V.: Ideas for a Physiognomy of Plants, in: *Views of Nature: Or Contemplations on the Sublime Phenomena of Creation*, edited by: Otte, E. C. and Bohn, H. G., Cambridge University Press, Cambridge, 210–352, ISBN 9781139095983, 2011 [1806].
- Humboldt, A. V.: Cosmos: A sketch of a physical description of the universe I, in: vol. 1, Henry G. Bohn, London, 1849 [1845].
- Humboldt, A. V.: Cosmos: A sketch of a physical description of the universe II, in: vol. 2, Henry G. Bohn, London, 1849 [1847].
- Husserl, E.: *The crisis of European sciences and transcendental phenomenology: an introduction to phenomenological philosophy*, Northwestern University Press, Evanston, IL, ISBN 9780810102552, 1970 [1936].
- Ingold, T.: The temporality of the landscape, *World Archaeol.*, 25, 152–174, <https://doi.org/10.1080/00438243.1993.9980235>, 1993.
- James, P. E. and Martin, G. J.: *All Possible Worlds: A History of Geographical Ideas*, Wiley & Sons, New York, NY, ISBN 0471061212, 1981.
- Kant, I.: Physical geography, in: *Kant: Natural Science*, edited by Watkins, E., Cambridge University Press, Cambridge, 434–679, <https://doi.org/10.1017/CBO9781139014380>, 2012 [1802].
- Keighren, I. M.: History and philosophy of geography II, *Prog. Hum. Geogr.*, 42, 770–778, <https://doi.org/10.1177/0309132517730939>, 2018.
- Kenzer, M. S.: Milieu and the "intellectual landscape": Carl O. Sauer's undergraduate heritage, *Ann. Assoc. Am. Geogr.*, 75, 258–270, <https://doi.org/10.1111/j.1467-8306.1985.tb00085.x>, 1985.
- Kenzer, M. S.: Tracking Sauer across Sour Terrain, *Ann. Assoc. Am. Geogr.*, 77, 469–474, <https://doi.org/10.1111/j.1467-8306.1987.tb00173.x>, 1987.
- Kersten, E. W.: Sauer and 'Geographic Influences', *Yearbook of the Association of Pacific Coast Geographers*, 44, 47–73, <https://doi.org/10.1353/pcg.1982.0000>, 1982.
- Keyserling, H.: *Prolegomena zur Naturphilosophie*, J. F. Lehmann, Munich, 1910.
- Korf, B.: Kiel 1969 – ein Mythos?, *Geogr. Helv.*, 69, 291–292, <https://doi.org/10.5194/gh-69-291-2014>, 2014.
- Korf, B.: 'German Theory': Cosmopolitan geographies, counterfactual histories and the (non)travel of a 'German Foucault', *Environ. Plan. D*, 39, 925–944, <https://doi.org/10.1177/0263775821989697>, 2021.
- Korf, B. and Wardenga, U.: Kiel 1969: Ein Erinnerungsort der Geographie, *Geogr. Helv.*, 76, 381–384, <https://doi.org/10.5194/gh-76-381-2021>, 2021.
- Korf, B., Rothfuß, E., and Sahr, W.-D.: Tauchgänge zur *German Theory*, *Geogr. Helv.*, 77, 85–96, <https://doi.org/10.5194/gh-77-85-2022>, 2022.
- Kwa, C.: Alexander von Humboldt's invention of the natural landscape, *Europ. Legacy*, 10, 149–162, <https://doi.org/10.1080/1084877052000330084>, 2005.

- Leighly, J.: Carl Ortwin Sauer, 1889–1975, *Ann. Assoc. Am. Geogr.*, 66, 337–348, <https://doi.org/10.1111/j.1467-8306.1976.tb01094.x>, 1976.
- Leser, H.: *Geographie in Forschung und Gesellschaft: Wege und Wandel – Eine Ideenskizze\**, *Geogr. Helv.*, 69, 115–120, <https://doi.org/10.5194/gh-69-115-2014>, 2014.
- Livingstone, D. N.: *The Geographical Tradition*, Wiley-Blackwell, ISBN 9780631185864, 1993.
- Livingstone, D. N.: Environmental Determinism, *The SAGE handbook of geographical knowledge*, edited by: Agnew, J. A. and Livingstone, D. N., SAGE, 368–380, ISBN 978-1-4129-1081-1, 2011.
- Mayhew, R. J.: Geography's Genealogies, in: *The SAGE handbook of geographical knowledge*, edited by: Agnew, J. A. and Livingstone, D. N., SAGE, London, 21–38, ISBN 9781412910811, 2011.
- Minca, C.: Humboldt's compromise, or the forgotten geographies of landscape, *Prog. Hum. Geogr.*, 31, 179–193, <https://doi.org/10.1177/0309132507075368>, 2007.
- Muenzer, C.: Begriff (Concept), *Goethe-Lexicon of Philosophical Concepts*, 1, 20–44, <https://doi.org/10.5195/glpc.2021.34>, 2021.
- Penn, M. and Lukermann, F.: Chorology and Landscape: An Internalist Reading of “The Morphology of Landscape”, in: *Perspectives on Carl O. Sauer and Berkeley School Geography*, edited by: Mathewson, K. and Kenzer, M. S., Geoscience Publications, Baton Rouge, LA, 233–260, ISBN 0938909088, 2003.
- Ratzel, F.: Lebensraum: a biogeographical study [1901], *J. Hist. Geogr.*, 61, 59–80, <https://doi.org/10.1016/j.jhg.2018.03.001>, 2018 [1901].
- Ritter, C.: Die Erdkunde im Verhältniss zur Natur und zur Geschichte des Menschen: oder allgemeine vergleichende Geographie, als sichere Grundlage des Studiums und Unterrichts in physikalischen und historischen Wissenschaften, in: vol. 1, G. Reimer, Berlin, 1822.
- Ritter, C.: Schreiben an Heinrich Berghaus, in Beziehung auf den vorstehenden Aufsatz des Hrn. Julius Fröbel, *Annalen der Erd-, Völker- und Staatenkunde*, 4, 506–520, 1831.
- Ritter, C.: *Allgemeine Erdkunde. Vorlesungen an der Universität zu Berlin gehalten*, Georg Reimer, Berlin, 1862.
- Rose, M.: Gathering ‘Dreams of Presence’: A Project for the Cultural Landscape, *Environ. Plan. D*, 24, 537–554, <https://doi.org/10.1068/d391t>, 2006.
- Sauer, C. O.: The survey method in geography and its objectives, *Ann. Assoc. Am. Geogr.*, 14, 17–33, <https://doi.org/10.1080/00045602409356891>, 1924.
- Sauer, C. O.: *The Morphology of Landscape*, *Univers. California Publ. Geogr.*, 2, 19–53, 1925.
- Sauer, C. O.: The formative years of Ratzel in the United States, *Ann. Assoc. Am. Geogr.*, 61, 245–254, <https://doi.org/10.1111/j.1467-8306.1971.tb00780.x>, 1971.
- Sauer, C. O. and Leighly, J. B.: *Syllabus for An Introduction to Geography I. Elements*, Edwards Brothers, Ann Arbor, MI, 1925.
- Schultz, H.-D.: *Raumkonstrukte der klassischen deutschsprachigen Geographie des 19./20. Jahrhunderts im Kontext ihrer Zeit. Ein Überblick*, *Geschichte Gesellschaft*, 28, 343–377, 2002.
- Schultz, H.-D.: *Der Realraum als Problem: Eine Lektion aus der Disziplingeschichte*, Wochenschau Verlag, Frankfurt a. M., ISBN 9783734407246, 2018.
- Seamon, D.: Goethe, Nature, and Phenomenology: An Introduction, in: *Goethe's Way of Science. A Phenomenology of Nature*, edited by: Seamon, D. and Zajonc, A., SUNY Press, Albany, NY, 1–14, ISBN 9780791436820, 2005.
- Seamon, D. and Larsen, T.: Humanistic geography, in: *The International Encyclopedia of Geography*, edited by: Richardson, D., Castree, N., Goodchild, M. F., Kobayashi, A., Liu, W., and Marston, R. A., Wiley & Sons, Hoboken, NJ, 1–12, <https://doi.org/10.1002/9781118786352.wbieg0412.pub2>, 2020.
- Semple, E. C.: *Influences of Geographic Environment. On the Basis of Ratzel's System of Anthro-Geography*, Henry Holt and Company, New York, NY, 1911.
- Solot, M.: Carl Sauer and Cultural Evolution, *Ann. Assoc. Am. Geogr.*, 76, 508–520, <https://doi.org/10.1111/j.1467-8306.1986.tb00133.x>, 1986.
- Wellbery, D.: Form (Form), *Goethe-Lexicon of Philosophical Concepts*, 1, 45–52, <https://doi.org/10.5195/glpc.2021.38>, 2021.
- Werlen, B.: Gibt es eine Geographie ohne Raum? Zum Verhältnis von traditioneller Geographie und zeitgenössischen Gesellschaften (Human Geographies without Space? The Relationship between Traditional Geography and Late-Modern Societies), *Erdkunde*, 47, 241–255, <https://doi.org/10.3112/erdkunde.1993.04.01>, 1993.
- Williams, M.: Sauer, C., in: *International encyclopedia of human geography*, edited by: Kitchin, R. and Thrift, N. J., Elsevier, Amsterdam, Oxford, 15–18, ISBN 9780080449111, 2009a.
- Williams, M.: Berkeley School, in: *International encyclopedia of human geography*, edited by: Kitchin, R. and Thrift, N. J., Elsevier, Amsterdam, Oxford, 300–304, ISBN 9780080449111, 2009b.
- Wittgenstein, L.: *Tractatus logico-philosophicus*, Routledge, London, New York, ISBN 9780415255622, 2001 [1922].
- Wylie, J.: *A Single Day's Walking: Narrating Self and Landscape on the South West Coast Path*, *Trans. Inst. Brit. Geogr.*, 30, 234–247, <https://doi.org/10.1111/j.1475-5661.2005.00163.x>, 2005.