

Abstract: Focusing on the so-called Nördliche Kalkalpen or Northern Limestone Alps of Germany and Austria, I will discuss how human interaction with these mountains during the age of the Anthropocene shifts from scientific and athletic exploration to commercial and industrial exploitation. More specifically, I will examine travel narratives by the nineteenth-century mountaineers Friedrich Simony and Hermann von Barth, juxtaposing their respective experiences in diverse Alpine subranges with the environmental history of those regions. This juxtaposition harbors a deeper paradox, one that can be formulated as follows: Whereas Simony and Barth both rank as historically important Erschließer of the German and Austrian Alps, having explored their crags and glaciers in search of somatic adventure and geoscientific knowledge, these very sites of rock and ice were about to become so erschlossen by modernized tourism that one wonders where the precise boundaries between individual-based discovery and technology-driven development lie. In other words, during the nineteenth century a kind of Dialektik der Erschließung (a variation on Horkheimer and Adorno’s Dialektik der Aufklärung) manifests itself in the increasing anthropogenic alteration of the Alps.

Keywords: Anthropocene; Alps; Friedrich Simony; Hermann von Barth

1. Introduction

In the original version of Das abenteuerliche Herz from 1929, Ernst Jünger reminisces on his ascent of the Zugspitze (2962 m/9718 ft.), Germany’s highest mountain, in the following fashion: “Welch herrlichen Tag verlebte ich damals, kurz nachdem ich die Zugspitze zum letzten Male bestiegen hatte, ehe sie die Technik für immer unbesteiglich machte” (Jünger 1987, p. 108). Jünger’s quasi-epigrammatic statement attests to the historical and deeper dialectical tension between the adventurist sport of alpinism and the rise of mechanized mountain tourism. Departing from Jünger’s mixed experiences atop this iconic German peak at a critical juncture of Alpine environmental history and maintaining the focus on this very region, namely the so-called Nördliche Kalkalpen or Northern Limestone Alps, I will discuss how human interaction with these mountains during the Anthropocene shifts from scientific and athletic exploration to commercial and industrial exploitation. More specifically, I will examine travel narratives by the nineteenth-century mountaineers—indeed pioneers—Friedrich Simony and Hermann von Barth, juxtaposing their respective experiences in diverse Alpine subranges with the environmental history of those regions. This juxtaposition harbors a deeper paradox, one that can initially be formulated as follows: Whereas Simony and Barth both rank as historically important Erschließer of the German and Austrian Alps, having explored their crags and glaciers in search of somatic adventure and geoscientific knowledge, these very sites of rock and ice were about to become so erschlossen by modernized tourism that one wonders where the precise boundaries between individual-based discovery and technology-driven development lie. In other words, during the nineteenth century a kind of Dialektik der Erschließung (a variation on Horkheimer and Adorno’s Dialektik der Aufklärung) manifests itself in the increasing anthropogenic alteration of the Alps. This dialectic extends, on a linguistic level, to the word Erschließung itself, which
possesses a number of seemingly contradictory denotations and connotations, particularly as they apply to the alpine environment.¹

As will become apparent in the argumentative course of this article, I am less concerned with the sociohistorical phenomenon of mass tourism, whereby the Alps were rendered ever more accessible through the construction of railways, tunnels, gondolas, and other technological novelties than I am with the sport of mountaineering and the personal narratives that it produced. As Jeffrey Mathes McCarthy has put forward in his edited anthology, Contact: Mountain Climbing and Environmental Thinking: “I suggest we understand the mountaineering narrative as a symptom of Western civilization, and a measure of civilization’s shifting approaches to the environment” (McCarthy 2008, p. 2). Most recently, in her comprehensive study Peak Pursuits: The Emergence of Mountaineering in the Nineteenth Century (2020), Caroline Schaumann has offered fruitful, multi-pronged analyses of climbing narratives by a host of scientist-mountaineers from Germany (Alexander von Humboldt), Switzerland (Horace Bénédict de Saussure), Britain (James David Forbes, Alfred Wills, John Tyndall, Edward Whymper, and Leslie Stephen), and the United States (Clarence King and John Muir). Some of the now canonical texts by these seminal mountain writers, a variation on the more established term “nature writers,” include Saussure’s four-volume Voyages dans les Alpes (1779–1796), Wills’s Wanderings among the High Alps (1958), Tyndall’s Hours of Exercise in the Alps (1872), Whymper’s Scrambles amongst the Alps (1872), Stephen’s The Playground of Europe (1872), King’s Mountaineering in the Sierra Nevada (1872), and Muir’s My First Summer in the Sierra (1911). Following these generic and genetic cues, my prime focus will be on precisely such autobiographical narratives rather than, say, literary texts or historical accounts, which have long been the principal sources of ecocritical inquiry in the humanities. Moreover, narratives of this kind are fruitful for the heterogeneous interdiscipline of ecocriticism insofar as they themselves constitute a hybrid genre. On the one hand, they are works of nonfiction and attest to factual feats that occurred within the history of alpinism. On the other, they draw on individual experiences and are thereby inflected by the narrator in question; tinged by his or her接触 with the natural environment; sometimes even poetically embellished to such a degree that the lines between scientific observation and literary transfiguration become blurred. (As will soon be seen, this poeticizing tendency is on full display in the writings of Simony.) This fertile blend of scientific exploration, aesthetic representation, and physical exertion has been aptly summarized by Schaumann as follows: “Over the course of the nineteenth century, science, poetics, and embodiment became mutually constitutive in the evolution of mountaineering” (Schaumann 2020, p. 4).

2. Enlightenment and Environment

McCarthy’s above-mentioned anthology is structured around three modes of human-mountain engagement: conquest, caretaking, and connection. That is, it traces patterns of conduct and basic underlying mentalities that include objectification (mastering the mountain as something separate from human existence and subordinate to human endeavor); stewardship (appreciating the alpine environment as wilderness and safeguarding it from industrial and consumer interests); and consonance (overcoming the Cartesian divide between active subject and passive object, person and place, rock climber and rockface). As McCarthy (2008, p. 5) concludes: “climbing engages the whole spectrum of attitudes toward nature, and that’s why climbing matters.” On a more philosophical note,

¹ As is apparent by now, I oscillate between upper and lower-case spellings of “Alpine”/“alpine,” “Alpinism”/“alpinism,” etc. The logic behind this practice can be summarized as follows. When referring specifically to the European Alps and the tradition of climbing in this geographically restricted range, I will capitalize all variants of the basic morpheme “Alp-.” When referring more generally to mountainous terrain and the practice of climbing in such an environment, regardless of global geography, I will opt for lower-case orthography. Admittedly, an imprecise line sometimes prevails between the two.

² Granted, all the narratives previously mentioned as well as the ones by Simony and Barth subsequently discussed, were written by men. For the record, however, one of the most eloquent and engrossing mountain narratives of the nineteenth century is Isabella L. Bird’s A Lady’s Life in the Rocky Mountains, published in 1879. Unfortunately, given the context of the present article, I am unable to discuss it here.
he alludes to Adorno’s (neglecting to mention Horkheimer) assertion that “people ‘have always had to choose between their subjection to nature or the subjection of nature to the self’” (McCarthy 2008, p. 19). This reference to the *Dialektik der Aufklärung* (1947) runs as follows in the original German: “Die Menschen hatten immer zu wählen zwischen ihrer Unterwerfung unter Natur oder der Natur unter das Selbst” (Horkheimer and Adorno 1988, p. 38). Although this classic work of the Frankfurt School has traditionally been read as a critique of Enlightenment thinking and its dark side of instrumental reason, it can also be said to expose the very ideological nerve of the Anthropocene. In the end, these two readings are intertwined. Granted, theories about the precise beginnings and catalysts of the Anthropocene vary widely, ranging from the rise of agriculture and human settlement some 8000 years ago (the so-called Neolithic Revolution) to the “great acceleration” of human population, industrial production, and radioactive waste during the middle decades of the twentieth century. The first proposed theory, granted not by professional geologists per se, sets the incipience of this new geological epoch around 1770, when the Industrial Revolution and, more specifically, the implementation of the steam engine led to environmentally detrimental and possibly irreversible carbon emissions. The scientific and broader interdisciplinary literature since then has—so to speak—“greatly accelerated” such that the postwar hypothesis of human hyper-activity mentioned above now seems to hold sway. Nevertheless, whether the Age of Enlightenment and that of the Anthropocene are historically coincident or not, they undeniably represent two facets of the same basic anthropological-environmental problem. This destructive dynamic is encapsulated in the opening lines of *Dialektik der Aufklärung* as follows:

Seit je hat Aufklärung im umfassendsten Sinn fortschreitenden Denkens das Ziel verfolgt, von den Menschen die Furcht zu nehmen und sie als Herren einzusetzen. Aber die vollends aufgeklärte Erde strahlt im Zeichen triumphalen Unheils. (Horkheimer and Adorno 1988, p. 9)

To be sure, there is nothing radically new about this postwar thesis concerning the dialectical nature of Enlightenment rationality. (Though the intellectual-historical contextualization and sociological application of these “philosophical fragments” remain, to this day, original and incisive.) There has always been an inherent dialectical undertow to the Enlightenment project and, right from its—somewhat belated—start in Germany during the mid-eighteenth century, there was no lack of discussion about the potential peril of human reason taken to the extreme. Indeed, in a kind of dialogical if not deeper dialectical maneuver, Johann Friedrich Zöllner anonymously published a satirical fable-like poem in the same issue of *Berlinische Monatsschrift* that featured Kant’s now famous essay “Beantwortung der Frage: Was ist Aufklärung?” What is more, he positioned it on the page right before Kant’s text, no doubt as a kind of critical accompaniment piece. His didactic lyric, entitled “Der Affe: Ein Fabelchen,” graphically illustrates what Horkheimer and Adorno (1988, p. 3) call “das Destruivie des Fortschritts” and, more concretely, underscores the environmental damage that an inflated faculty of reason can recklessly inflict. Enlightenment may illuminate and emancipate in the name of humanity but, at the same time, it cannot but incinerate a naturally intact forest:

Ein Affe steckt’ einst einen Hain
Von Zedern Nachts in Brand,
Und freute sich dann ungemein,
Als er’s so helle fand.
“Kommt Brüder, seht, was ich vermag;

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3 The same can be said of Horkheimer’s solo-authored *Eclipse of Reason*, also published in 1947. Indeed, the German translation from 1967, *Zur Kritik der instrumentellen Vernunft*, makes the dialectical connection between human rationality and environmental instrumentalization all the more apparent. For representative studies of this issue, in both German and English, see (Krusekamp 1991) and (Cook 2011).

4 See (Crutzen and Stoermer 2000).

5 See for instance (McNeill and Engelke 2014; Zalasiewicz et al. 2019; Thomas et al. 2020).
Ich,—ich verwandle Nacht in Tag!

Die Brüder kamen groß und klein,
Bewunderten den Glanz
Und alle fingen an zu schrein:
Hoch lebe Bruder Hans!

“Hans Affe ist des Nachruhms werth,
Er hat die Gegend aufgeklärt.” (Zöllner 1784, p. 480)

Enlightenment is thus a kind of double-edged sword; or, in this case, a double-effect torch. Indeed, the word itself—here in its past participial form “aufgeklärt”—captures this dual signification, and its position at the very end turns the final verse into a kind of mordant punchline: illumination equals conflagration. Furthermore, the sequence of events in the poem suggests that anthropological enlightenment is predicated on ecological devastation—or, at best, that the two go hand in hand. Beyond the transparent cultural critique that Zöllner aims at his contemporaries, the Anthropocene lurks in these lines on a deeper, more unspoken level. The repetitive ego-driven utterance “Ich,—ich verwandle Nacht in Tag!” signifies no less than the transformation of nature on the part of the human being, here represented in hominid form, the most evolutionarily advanced animal character conceivable in a fable. Nature, or what Hartmut and Gernot Böhme call “das Andere der Vernunft,” becomes dominated—and here decimated—by the instrumental doings of post-Kantian homo sapiens—or what one might better call homo rationalis. In more specific terms: “Dieses Andere, das die Vernunft nicht umschließt, verkommt zu einem diffusen, unheimlichen und bedrohlichen Bereich,” resulting in a “Dialektik der Aneignung und Verdrängung” (Böhme and Böhme 1985, p. 14). In other words: In our modern definition of reality, particularly of the nonhuman world, a problem-fraught relationship of acceptance and denial, of physical appropriation and psychological repression, holds sway. The question then remains: To what extent is the dialectic of Erschließung, pursued here in these pages, also caught up in the broader dialectic of Enlightenment, indeed in the even grander workings of the Anthropocene?

3. Elucidating Erschließung

First, however, it is necessary to grasp what exactly the word Erschließung means and discursively entails. Compare for instance its everyday use in mountaineering discourse, here a description taken from a guidebook on the glaciated mountains of the Eastern Alps: “Diese stattliche Doppelhütte [the Essen-Rostockerhütte in the Hohe Tauern Range] im oberen Maurertal erschließt ein ungewöhnlich reichhaltiges Revier an schönen, großen Bergen (Seibert 1990, pp. 137, 140). This simple sample sentence carries all sorts of implications, ranging from the topographical to the philosophical.

The basic definition of erschließen runs as follows: “etwas bisher nicht Genutztes, etwas Verschlossenes für etwas/jemanden zugänglich oder nutzbar machen” (DWDS). This primary meaning involves two sub-significations or, better yet, gradations: one can make something “accessible” or one can make something “useful.” A definite degree of difference exists between the two and one wonders whether the first must necessarily lead to the second. In other words: How fine is the conceptual line between accessing and utilizing? Of course, the former presupposes and can easily result in the latter—but it does not have to. A consideration of the word’s semantic field is perhaps more helpful in resolving this issue. According to various print and online dictionaries, the most common applications of erschließen and Erschließung have to do with: geographical regions or topographical terrain; raw materials; economic markets; texts or documents; buildings and property. All of the above can be erschlossen in the dual sense of obtaining access to them and making use of them in some fashion. In more precise terms, an unknown or unexplored realm can be accessed by outside forces and thereby opened up for future use, whether construction, extraction, or whatever other form of ‘development’ happens
to occur in the wake of the particular access that was initially gained. Indeed, this word, perhaps the best overall English translation for *Erschließung*, is also contextually rich and multivalent. As often employed in current parlance, it similarly implies an incursion into, followed by a utilitarian transformation of, an untouched or intact space. Take, for example: “housing developments” (ranging from suburban neighborhoods to exurban McMansions); “commercial development” (shopping centers, strip malls, factory outlets); and “recreational development” (vacation homes, golf courses, ski resorts). Oftentimes, the single word ‘development’ says it all, especially in the business and real estate worlds—if not in the general American mentality what with its perpetual pursuit of growth and prosperity.

A secondary meaning of *erschließen*, usually reflexive, has to do with *offenbaren* or “to reveal” / “disclose,” for example: “der Sinn des Buches erschließt sich nur dem aufmerksamen Leser.” In section 44 of *Sein und Zeit*, Heidegger famously exploits this latter signification in his analysis of Dasein’s *Erschlossenheit* as an existential form of self-awareness or self-disclosure, and he later juggles the terms *Erschlossenheit*, *Entschlossenheit*, and *Entdecktheit* as analogous—though not completely synonymous—structures of Dasein’s primordial truth, otherwise known as *aletheia* or *Unverborgenheit*. Heideggerian wordsmithery aside, one may wonder, from a linguistic standpoint, why *erschließen* means what it does; that is, more or less the opposite of *schließen*. In theory, this meaning should better hold for *entschließen*, given the privative function of the prefix *ent-*. (Compare for instance the English: “to close” vs. “to disclose” and “to lock” vs. “to unlock.”) But this is not—or at least no longer—the case in German, as *entschließen* has evolved to mean something different (namely, “to determine/decide”) than *erschließen* and *aufschließen*. The function of the German prefix *er-* is, strictly speaking, not privative or negative, in fact quite the opposite: it often implies escalation, augmentation, intensification (compare for example *erarbeiten*, *erreifen*, *ergreifen*, *ersteigen*). More extremely, it suggests the achievement of a goal, as in *erwerben*, *erreichen*, and *erzielen*. Ultimately, such linguistic accentuations may lie at the core of the loaded word *Erschließung*, since utilization not only presupposes accessibility but furthermore involves an arduous process or coveted goal, both of which may well require even greater toil than the act of dis-covering a given locality in the first place.

In light of these reflections, let me revisit the use of the word *erschließen* in quotidian mountaineering discourse, drawing on the example above: “Diese stattliche Doppelhütte im oberen Maurertal erschließt ein ungewöhnlich reichhaltiges Revier an schönen, großen Bergen.” The stately hut mentioned here “permits access” to an especially rewarding mountain landscape; indeed, it permits far easier access than if one were to attempt an all-day approach from the valley below. As will soon be discussed, this mode of *Erschließung* through the rapid expansion of a hut system during the late nineteenth and early twentieth centuries will lead to an increase in visitation and, consequently, to increased degradation of the ecologically fragile alpine zone. Other commonplace uses of *erschließen* and its variants can be found in connection with Friedrich Simony and Hermann von Barth, whose exploratory exploits in the Northern Limestone Alps epitomize certain historical-cultural trends and shed further light on the dialectical interplay of discovery and development. For initial insight into this connection, compare some sample statements regarding their respective biographies as found in Wikipedia, which, as a popular gateway to instantly available information, is the perfect place to document the everyday usage of a linguistic term:

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6 In *Being and Nothingness* (1943), Jean-Paul Sartre offers some existential-phenomenological observations on rock climbing and skiing, both Alpine and Nordic techniques. (Sartre 1992, pp. 620, 627–29, 658.) Heidegger, an avid cross-country skier, was reportedly elated at this attempt to describe one’s quasi-proprioceptive perception of the environment through the act of skiing and had once even contemplated writing his own philosophical treatise on the matter. To be sure, ecocriticism has capitalized on existential phenomenology—especially the work of Maurice Merleau-Ponty—to illuminate the participatory rather than binary relationship between humans and nature. The abovementioned Jaffrey McCarthy further applies it to mountain climbing, the narration of which “suggests a new way of being in the world” (McCarthy 2008, pp. 12–15, here 15).

7 Other common inflections in meaning include: (1) a sudden change of state (*erroten*, *erwärmen*, *erzittern*); (2) incipience (*erblühen*, *erglühen*, *erklingen*); and (3) verbs entailing not just hard-won results but often lethal ones (*ermorden*, *erschießen*, *erhängen*). (see DWDS 2020).
Friedrich Simony is known for the Erschließung des Dachsteingebirges. Hermann von Barth began exploring the Berchtesgadener Alpen in 1868. Barth is famous for Erschließung des Karwendels. Names of geographic objects commemorate Hermann von Barth's efforts in the Nördlichen Kalkalpen.

(Simony 2020; Barth 2020; all highlights are mine)

4. Friedrich Simony and the Dachstein

As both scientist and alpinist, Friedrich Simony (1813–1896) was a prototypical practitioner of nineteenth-century mountaineering. He was the first person to conduct systematic geological, glaciological, meteorological, and even limnological studies in the Eastern Alps, following the precedent of Horace-Bénédict de Saussure in the western part of the range during the previous century. In 1851 he was appointed professor of geography at the University of Vienna, the first position of its kind in Austria, as all branches of geo-studies had previously been subsumed under the academic discipline of geology. And it was in fact a geologist, Eduard Suess, who in 1862 helped recruit Simony and others to form the Austrian Alpine Association, “a club that combined scientific research with bold ventures across the Alps” and whose principal goal was “to increase knowledge about the Alps, in particular cultivate love for the Austrian Alps, and facilitate travel to the mountains” (Keller 2016, pp. 23, 24). In addition to his many achievements in the professional arena, Simony was also an active alpinist, known for his exploration of the Dachstein massif located in the Salzkammergut of Upper Austria. His accomplishments in this athletic domain include the first winter ascent of the Hohe Dachstein (2995 m/9826 ft.), the second highest yet most glaciated peak in the Northern Limestone Alps. He is also responsible for creating the first secured route or via ferrata in Europe, one that leads climbers up the summit pinnacle of the Dachstein above the Hallstätter Glacier (or, as it was known back then, the Karls-Eisfeld). This latter undertaking is narrated in “Zwei Septembernächte auf der Hohen Dachsteinspitze” (1844). Another well-known publication, “Drei Dezembertage auf dem Dachsteingebirge” (1843), does not recount Simony’s actual winter ascent of the mountain in January of 1847, but rather a three-day scientific expedition to the upper reaches of the Hallstätter Glacier in December of 1842. Both accounts are conveniently combined in Auf dem Hohen Dachstein (1921), an illustrated volume published twenty-five years after Simony’s death. Originally, however, they appeared in the popular magazine Wiener Zeitschrift für Kunst, Literatur, Theater und Mode, which was also an important literary vehicle for Adalbert Stifter during the 1840s. The biographical and intellectual affinities between Simony and Stifter run deep, however this is not the place to pursue them. Suffice it to say that Simony, a professional scientist, opted to publish these narratives in a literary rather than scholarly forum. Even more, he tends to wax poetic in both texts, at times to a stylistic and descriptive extreme bordering on romanticism. Though he scientifically deconstructs such fabled phenomena as the Brocken specter and the Alpine dragon (see Simony 1921, pp. 88–89, 68–69), he is not averse to projecting elves and fairy queens onto the mountain landscape (see Simony 1921, pp. 22, 59) or evoking misty and moonlit scenes reminiscent of paintings by Caspar David Friedrich and poems by Joseph von Eichendorff. Nevertheless, his “blumig-bilderreiche[r] Stil[-]” (Straub 2014, p. 115) and penchant for romantic tropes are ultimately counterbalanced, if not outweighed, by his obstinate scientific orientation and keen eye for topographical detail.

In “Drei Dezembertage auf dem Dachsteingebirge,” Simony makes his scientific goal clear from the start: “Ich beschloß jetzt, mein lang genährtes Vorhaben, auf dem Karlsgletscher im Winter gewisse wissenschaftliche Beobachtungen anzustellen und zu-

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8 For more rigorous scholarly accounts of Simony’s life and work, see (Penck 1898; Böhmersheim 1899). For the same regarding Barth, see (Schmitt 1939; Ireton 2020); see also the far more detailed and intriguing biographical novel by (Gegenfurtner 1947).

9 For further reading, see, in chronological order: (Neunlinger 1950; Krökel 1955; Braunigart 2004; Braun 2006; Ireton 2012).
gleich auch einige Vorbereitungen für die künftigen Untersuchungen oben zu treffen, auszuführen” (Simony 1921, p. 11). He has no intention to climb the Hohe Dachstein but merely to investigate its hibernal glacial flanks—though, granted, a secondary impetus lies in proving to the skeptical locals “daß man auch im Winter bis zum Eisfelde gelangen könne” (Simony 1921, p. 12). (This is a common topos in European mountaineering literature, namely the active and implicitly superior Alpinist outsider versus the passive if not submissive Alpine natives.) In other words, as the title indicates, his goal is limited to trekking “auf dem Dachsteingebirge,” in contrast to the subsequent account of overnighting “auf der Hohen Dachsteinspitze.” He and his partner Wallner outfit themselves with the standard gear of the era: rope, axe, shovel, crampons, and Schneereifen (similar, though not nearly as effective in powdery snow, to the various models of snowshoes used by Native Americans and their Asiatic ancestors). Simony’s detailed narrative of the laborious approach through deep snow, the cold nights spent in a primitive Sennhütte, and an incident involving an avalanche that temporarily buried his partner is punctuated throughout by scientific observations. He regularly measures—or at least remarks upon previously established measurements of—his natural surroundings, for example air temperature, snow consistency, and the elevations of nearby peaks. He even claims to have discovered, at least for himself, the meteorological phenomenon of inversion by ascertaining the daytime temperature differences between Hallstatt in the valley below and his vantage points above tree line. Some of the more interesting data Simony aims to gather concern “das Vorrücken oder Nichtvorrücken des Gletschers” (Simony 1921, p. 29), which he determines by placing survey stakes and taking seasonal measurements of the glacier’s movement. In a highly descriptive and lyrically expressive scene that Stifter later adopted in Bergkristall, he also gauges the temperature of the glacier’s interior by exploring an ice cave. Here it is one degree (Réaumur) warmer than the outdoor air, yet still at the freezing point; the glacier thus remains in a state of equilibrium, at least during the winter months. In the greater anthropocenic scheme of things, however, it is in the process of melting and thus receding. Though Simony could never have predicted such a worst-case scenario based on his own historically advanced systematic surveys, scientists today estimate that the Hallstätter Glacier will disappear altogether within the next ten to twenty years (see Brandner 2019).

If “Drei Dezembertage auf dem Dachsteingebirge” yields more scientific than alpinist results, the opposite is true of “Zwei Septembernächte auf der Hohen Dachsteinspitze.” This text narrates the high-alpine ventures of Simony and his “team” (referred to as “meine Leute”), a crew of eight men who help him construct a Klettersteig on the summit pyramid of the Hohe Dachstein. As mentioned earlier, this was the first secured climbing route in all of Europe; the next ones would not be established until 1869 on the Großglockner and 1873 on the Zugspitze, the highest peaks of Austria and Germany, respectively. The actual construction process occupies more the background of the narrative, in part because Simony seems to participate in little if any of the labor. In the foreground, he relates his summit sojourn over the course of two nonconsecutive nights (15–16 and 21–22 September 1843), recording his many geomorphological and meteorological observations. Another central difference between this autumn foray and his earlier winter sortie concerns the sheer amount of equipment and provisions that he and his team haul to the top of the mountain for both their occupational needs and human comfort: “ein ganzer Trödelmarkt von Holz, Eßwaren, Kleidungsstücken, Werkzeugen, allerlei Geschirr mit Wein, Milch und Kaffee, Pfanne, Ölfäß, Steigeisen, Schneereifen, Laterne, usw.” (Simony 1921, p. 82). One may wonder why some of these items should prove necessary for such a limited stint on the mountaintop, but it soon becomes clear that Simony is motivated by a secondary goal beyond the creation of a protected climbing route. In a kind of alpine reenactment of

10 On the first of the two narrated days, Simony and his crew are also accompanied by a local Simmerin who became the first woman to summit the Dachstein. She is simply referred to as “Nanni” and has not survived in the annals of Alpine history. Indeed, in the framing of Simony’s narrative, she is reduced to a stock “folksy” character whose simple ways and simplistic views about nature are meant to provide comic relief.
Zöllner’s fable, he builds a summit bonfire, which is intended to signal his presence (and perhaps conquest) to onlookers in the valleys below, but it soon flares up due to high winds and threatens to get out of control. While no human injury or environmental damage ensues, in part because he manages to scatter most of the burning wood over the summit’s edge and into the abyss, this incident nevertheless attests to just one of the many ways in which Simony, whether willingly or unwittingly, leaves anthropocenic traces upon the Dachstein—and, in the process, risks becoming “Hans der Affe” rather than Friedrich the (non-dialectically) enlightened scientist. Granted, such traces are on the rise anyway, as further attested by Simony’s interactions with a handful of other peak-baggers, whether local hunters serving as mountain guides or members of the Viennese cultural elite, some of whom turn out to be acquaintances from his urban university life. The Hohe Dachstein is clearly becoming ever more erschlossen since its first ascent in 1832, eleven years prior to Simony’s narration. (Simony himself climbed it for the first time in 1842.) It will, however, be made even more accessible thanks to the very Klettersteig that he and his team are in the process of creating. The few technical details mentioned in the text include the following: a ladder used to bridge the bergschrund; an approximately 200 m (100 Klafter) fixed rope secured by “20 schwere in den Fels eingebohrte Eisenringe”; and “in dem nackten Fels ausgehauen[e] Stufen” (see Simony 1921, pp. 51–52). By the end of the text, the project seems for the most part completed and what is now known as the “Randkluftsteig” ranks as one of the most popular climbs in all of Austria.

Those familiar with Klettersteige or vie ferrate know how environmentally problematic they are: tons of iron and steel are inflicted upon any given mountain in the form of cables, rods, rungs, ladders, and even suspension bridges. From today’s more ethical perspective of clean climbing, they can be said to “profane the Alps with gymnastic scaffolding” (Keller 2016, p. 69). Nearly 200 vie ferrate exist in Germany, over 400 in Italy, and more than 550 can be found in Austria, mainly in the Northern Limestone Alps, where Simony of course instigated this entire development. In fact, the longest and perhaps most challenging Klettersteig in all of Austria is the “Dachstein Super Ferrata,” which links three previously established routes on the unglaciated south face of the mountain. Simony thus emerges as a crucial catalyst of the operative dialectic between scientific exploration and athletic utilization insofar as he advances both practices on the Hohe Dachstein. What he calls “mein meteorologisches Observatorium auf der Zinne” (Simony 1921, p. 96) is at the same time a “bezwungener Bergriesel” (Simony 1921, p. 97), laden with artificial climbing aides and scarred by man-made steps hewn into the limestone rockface. In sum, the iconic Austrian mountain bears the early brunt of anthropogenic abuse, well before the late twentieth and early twenty-first centuries would wreak further human havoc on its rock and ice.

The environmental vicissitudes of the Hohe Dachstein extend far beyond a network of climber-friendly cables and iron reinforcements; even further Erschließung has occurred both on the part of and in the wake of Simony. While its summit may have become more erschlossen due to the secured route established by Simony and his team, the greater massif has been opened up to human “visitation”—in the dual sense of both Besuch and Heimsuchung—thanks to a strategic system of huts, the first of which was erected by Simony himself in 1843. This primitive shelter, built into the recess of a rock outcropping and sardonically dubbed “Hotel Simony,” is now an historical monument but otherwise serves no practical mountaineering function. It has, rather, yielded to ever bigger and better lodgings further upslope at the (ever retreating) foot of the Hallstätter Glacier: the Simonyhütte (1877); the Simony-Schutzhaus (1894); and the current Simonyhütte, constructed in the 1960s but newly renovated in 1999, with such amenities as an Alpine educational center, a sheltered climbing garden, and a biological waste treatment facility. It sleeps approximately 150 and is fully modernized in terms of in-house electricity, cell phone coverage, and helicopter-delivered provisions. Beyond the 2203 meters at which this mountain stronghold lies, an even greater logistical and technological complex enables access to the upper reaches of the Dachstein itself, thereby eliminating the necessity of long approaches by foot from the north, whether from Hallstatt or the Gosau Valley. This
industrialized infrastructure that transports tourists, within a matter of minutes, to the Hallstätter Glacier from the south side of the massif and accommodates their recreational desires includes: the Dachstein-Seilbahn or gondola; the mammoth Hunerkogel Bergstation (the creation of which required blasting the summit of this eponymous sub-peak, reducing its elevation by seven meters); and groomed cross-country (rather than downhill!) ski trails. Moreover, a variety of carnivalesque attractions offer further Alpine amusement, for instance an ice palace, a skyrocket, an even more vertiginous stairway called the “Treppe-ins-Nichts,” and an adjacent one hundred-meter-long suspension bridge made of sixty-three tons of steel. The Dachstein thus serves, in far more extreme fashion than in the case of early climbing technologies such as vie ferrate, as an emblematic example of what Tait Keller describes in the following—both pithy and alliterative—fashion: “Mechanized mountains invited the masses” (Keller 2016, p. 180).

5. Opening and Dominating the Alps

Based on this latest prompt from Keller’s book Apostles of the Alps: Mountaineering and Nation Building in Germany and Austria, 1860–1939, let me contextualize some of what I have discussed thus far within the broader history of European Alpinism. First of all, it should be noted that Keller’s bipartite study contains its own structural Dialektik der Erschließung: Part One is titled “Opening the Alps, 1860–1918,” while Part Two takes things a step further under the hypothesized heading: “Dominating the Alps, 1919–1939.” This historical progression reflects what lies at the heart of my own argument concerning human-mountain relations during the Age of the Anthropocene, though I tend to posit a more dynamic philosophical polarity than such a clear-cut epochal duality. Erschließung, whether manifested as physical-topographical accessibility or anthropological-ideological ascendency, are but flip sides of the same coin. As Hegel, for instance, asserts in his preface to the Phänomenologie des Geistes by way of allusion to Lessing’s Nathan der Weise: “die Wahrheit [ist] nicht eine ausgeprägte Münze, die fertig gegeben, und so eingestrichen werden kann” (Hegel 1988, p. 29). Truth is, rather, dialectically determined and hence entails a holistic integration of extremes, in accordance with the Hegelian mantra (which favors the more fluid substantivized adjective wahr- over the abstract and ultimately reified noun Wahrheit): “Das Wahre ist das Ganze” (Hegel 1988, p. 15).

But let me leave aside German speculative philosophy and turn to empirical German–Austrian history as chronicled by Keller, who observes that all kinds of “environmental engineering” (Keller 2016, p. 8) accompanied the surge in Alpine tourism during the 1860s and 1870s. Thanks to the expansion of railways and the construction of tunnels, most notably under the Mont Cenis and Gotthard Passes,11 tourists inundated the Alps, whether on organized Thomas Cook excursions or armed with their own Baedeker guidebooks. But to repeat what I stated earlier, this form of mass, non-mountaineering Erschließung is not the main concern of this article. What also increased in terms of hardcore alpinism was the following: blazed hiking trails crisscrossing the mountain landscape; steps chiseled into rocky ridges; bridges and ladders laid across glacial crevasses; and detailed topographical maps that produced—in the spirit of the Enlightenment—“rational contour lines” (Keller 2016, p. 18).12 One of the most renowned and prolific scholars of Alpine history, William August Brevoort Coolidge, has similarly summed up this development, here referring to the decades of the 1870s and 1880s or the so-called “Silver Age of Alpinism”:

It [the completion of the conquest of the Alps] saw also the reorganisation of the practical side of climbing—new Club huts were built, new high mountain hotels were opened, detailed special maps and guide-books for climbers only appeared in rapid succession; everything was made more convenient for the new generation, who, however, found that little more was left to them in search of

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11 See also (Aurada 1987) on this last form of—cartographic—Erschließung as it was specifically carried out in South Tyrol.
novelty than the discovery of “new routes” and of “inaccessible” pinnacles which received names only after they had been vanquished. (Coolidge 1908, p. 242)

The irony, as postulated here by Coolidge, is that this belated generation of Alpine pioneers enjoyed more “convenient” access to the heights yet were simultaneously forced to seek out more “inaccessible” summits in their quest for mountain glory.

As further suggested above, one of the main charters of the many continental Alpenverein chapters organized during the second half of the nineteenth century, following the formation of the British Alpine Club in 1857,13 was to build huts or renovate (read: aggrandize) previously existing ones. Nearly every chapter from nearly every corner of Germany and Austria began to establish its own lodge, indeed this constituted their primary mission. (Hence the seemingly incongruous names of huts strewn throughout the various subranges of the Austrian Alps, for instance: the Osnabrücker Hütte in the Hohe Tauern, the Dresdner Hütte in the Stubai Range, and the Berliner Hütte in the Zillertal Alps.) As the title of Keller’s book spells out: During the second half of the nineteenth century and the first half of the twentieth, nation building and mountaineering were closely connected, perhaps even mutually determined. In my own formulated take on the matter: The German and Austrian Alps became ever more erschlossen, in ever more industrialized fashion, and from ever more distant regions of Germany, whose own sovereign Alpine terrain is relatively low in elevation and significantly limited in scope compared to that of its Austrian neighbor. According to Keller, in 1874 there existed a total of fourteen huts in the German and Austrian Alps, recording 1451 annual visitors. By 1914, this number grew to 230 and the record of visitors skyrocketed accordingly to 260,000. In the meantime, during the 1880s, a massive construction effort took place across the Eastern Alps such that: “The acoustics of the landscape amplified the sounds of hammers and saws across the vales; the banging and clamoring echoed for miles . . . the mountains sounded like one large construction zone” (Keller 2016, p. 34). Moreover, the German and Austrian Alpenverein’s Hut and Trail Committee was faced with an “exact[ing]” bureaucracy, one that forced its chapters “to provide detailed blueprints and maps specifying accessibility [my emphasis] to fuel sources and potable water, a construction schedule including a budget and how the chapter intended to obtain materials, an environmental impact assessment, a maintenance plan, and the proof of building rights to the land, such as a public record of sale” (Keller 2016, p. 35). As the association grew, bureaucratic constraints of this kind only became more intricate such that “[o]utdoor organizations spent terrific sums of money to manicure the mountains and make that temporary stay as comfortable as possible” (Keller 2016, p. 48).

On a more dialectical note, huts also increasingly served as sites of scientific research and helped promote the Alpine Association’s “civilizing mission” of “classifying and ordering the Alps” (Keller 2016, p. 40) in the realms of botany, geology, minerology, meteorology, and glaciology. A crowning example of this blend of scientific inquiry and alpine endeavor is the Münchner Haus, constructed between 1900 and 1910 on the summit of the Zugspitze and serving as both a lodge for mountaineers and a meteorological observation station for scientists. Today, even non-athletically and non-scientifically inclined tourists, conveyed by either cog railway or cable car—two modern contraptions that epitomize what Keller calls the “industrial incursion into the Alps” (Keller 2016, p. 76)—can visit what has since become renowned as “Germany’s highest beer garden.” On the side, whether before or after beers, they can make the short jaunt to the craggy summit of the Zugspitze, enabled by what may well be the most mechanized mountain in all the Alps.14

13 The Austrian Alpenverein was founded in 1862, both the Italian Alpine Club and the Swiss Alpine Club in 1863, and the German Alpenverein in 1869. The German and Austrian Alpenverein formally merged in 1874.

14 A different kind of dialectic, or at least paradox, should not be ignored: It can be argued that mechanization in the name of mass tourism can be more environmentally friendly than overpopularized mountaineering. As Keller points out, cable cars “reduced the human footprint on the mountainside in the long term” since “[s]ightseers by the thousands sailed to the summits without trampling the delicate Alpine ecology” (Keller 2016, p. 165).
6. Hermann von Barth and Beyond

Hermann von Barth scrambled throughout the Wetterstein Range, summiting twenty-two peaks, six of which counted as first ascents, yet he preferred to avoid the Zugspitze precisely because of its easy accessibility and excessive popularity—even back in the pre-mechanized era of the 1870s. Barth represents an important counter-example to alpinists like Simony, whose exploratory ventures ultimately had exploitative consequences. His titanic tome, *Aus den Nördlichen Kalkalpen: Ersteigungen und Erlebnisse in den Gebirgen Berchtesgadens, des Allgäus, des Innthales, des Isar-Quellengebietes und des Wettersteins* (1874), is an approximately 650-page narrative of his (mainly) solo ascents through the various limestone ranges of Germany and Austria. His deep-seated aversion to the practices promoted by the Alpenverein is especially apparent in the fifth and final part of the book, “Aus dem Wettersteingebirge.” Here, by way of conclusion and with some semblance of a solution toward the anthropocenic problems raised above, I will outline Barth’s singular mountaineering ethos and general attitude toward the phenomenon of *Erschließung*, both of which run counter to the nineteenth-century norm. As will be seen, while he criticizes the rise of organized alpinism, above all in the Bavarian-Tyrolean border range of the Wetterstein, he finds refuge from the din of development in what was—and to some extent still is—one of the most unerschlossen pockets of the Alps: the Karwendel.

Hermann von Barth (1845–1876) climbed for only five seasons yet set foot on approximately 250 summits. Ironically, his life was cut short not from a mountaineering accident in the Alps but by his own hand in the tropics of Angola, where he contracted a malarial infection and—whether in a supreme act of self-will or a feverish state of mental derangement—fired a bullet through his heart. Barth is most famous for pioneering the practice of “guideless” (*führlerlos*) climbing. Aside from his early days in the Berchtesgaden Alps and some rare later occasions in other ranges, he adhered to this principle of solo climbing and became a vocal critic of the growing presence of mountain guides. In 1869, Barth’s second season of mountaineering, there were more than 236 officially registered guides in the Eastern Alps alone (see *Wer mit mir geht* 1977, p. 41), most of whom were not experienced climbers but rather local inhabitants who were familiar with the alpine terrain that happened to lie in their own backyard yet who lacked intimate knowledge of the surrounding peaks and their optimal routes. In his view, they tended to lead, and overly enable, their patrons up summits that were already well-trodden and hardly challenging in the first place. These diverse ethical and logistical protestations come to a head in his account of climbing in the Wetterstein Range during the summer of 1871. Here, in the midst of the “Zeitalter der Mode-Touren” (Barth 1874, p. 630), he deliberately avoids the Zugspitze, focusing instead on its unvisited satellite peaks, which he also wishes to make better known to his readers (see Barth 1874, pp. 519–20). His individualistic alpinist efforts in the heart of this overrun range can be summarized as follows:

> Zu entdecken gab es im Wettersteingebirge wenig; zu ersteigen mehr, als ich gedacht. Und wunderbar; gerade im Wettersteingebirge, wo meine Touren keinen anderen Zweck verfolgten, als Gipfel um Gipfel zu zwingen, zu keinem anderen Ende, als das souveraine “car tel est notre plaisir,”—für Niemand anders, als für mich,—, sind meine Unternehmungen nicht unbemerkt geblieben . . . (Barth 1874, p. 518)

Barth furthermore decries, here on a localized level, two characteristic tendencies in the greater history of Alpine *Erschlossenheit*: the renovation of the Knorr-Hütte by the Munich chapter of the Alpenverein (see Barth 1874, p. 546n); and the homegrown guides of Garmisch-Partenkirchen whose familiarity with the Wetterstein Range does not extend beyond its two most sought-after summits, the Zugspitze and Alpsspitze (see Barth 1874, p. 556n). It is therefore up to Barth to enlighten his readers about the rest of the range, whether its hidden recesses or elusive summits—terra incognita that he thoroughly explored yet did not logistically exploit. Indeed, Barth was a minimalist mountaineer, one who preferred to bivouac in the brush rather than indulge in the comfort of huts. His basic equipment consisted of an alpenstock, a pair of foot irons, a loaf of bread, and a
bottle of water (or wine); as luxury items, he carried a notebook, a map, a telescope, and a clinometer. The vial of poison that he, forever self-reliant, kept with him in the event of a critical climbing injury remained unused. As mentioned above, he died at his own hand in a different fashion and in a far different, non-alpine, environment.

Leaving geographically distant Africa aside, the Karwendel was, for Barth, a unique region of the Alps compared to other subranges, especially the neighboring Wetterstein. In his own words: “Das Karwendel-Gebirge liegt heute . . . noch verlassen und vergessen da, ein Stück alter Zeit, ein Probebild von dem Aussehen unserer Alpen vor einem halben Jahrhundert” (Barth 1874, p. 518). Here, where Barth spent more time and summited more peaks—approximately ninety—than in any of the other ranges he frequented, he could climb in freedom and solitude (aside from occasional encounters with hunters or herdsmen), unencumbered by the infrastructural advances that were emerging elsewhere in the German and Austrian Alps. In his own words: “das Karwendel kennt keine Führer. Selbst sehen, selbst planen, selbst handeln ist hier die Lösung” (Barth 1874, pp. 284–85). Indeed, the rugged Karwendel was explored relatively late within the context of Alpine history; the first huts were not built until 1879 (Karwendelhütte) and 1890 (Solsteinhütte), and the first published guidebook did not appear until 1888. And it was not until the early years of the twentieth century that actual, or at least historically discernible, “Klettererschließung” began to take place (Karwendelgebirge 2017, p. 6). Even today, the Karwendel remains one of the largest unsettled expanses in the Alps, and its strict policies regarding touristic visitation and human habitation help keep it environmentally intact.

Nevertheless, anthropogenic manipulation and more far-reaching anthropocenic modification have impacted every mountain range around the globe, regardless of the protective measures enacted in any given region. The fundamental fact is that glaciers are melting and rockfall is increasing. In other words, both rock and ice are bearing witness to the effects of climate change, as mountainscapes are none too gradually coming unglued. Moreover, microplastics are now depositing less visible toxic traces in the alpine environment (even on the upper reaches of Mount Everest), as they have long been doing in the maritime realm. Several world-renowned mountaineers, for example Reinhold Messner and Conrad Anker, have programmatically addressed this crisis, invoking their frontline contact with one of but many global ecozones that have been adversely affected in the Age of the Anthropocene. As the former for example writes about the Ortler (3905 m/12,812 ft.), the highest mountain in his native South Tyrol: “Dabei ist der Niedergang der Gebirge überall sichtbar. Am Gletscher auch hörbar, sogar riechen kann man ihn. Wo der Permafrost auftaut, rutscht, stinkt die Erde. Es riecht überall nach Faulnis” (Messner 2009, p. 9). Anker, for his part, elaborates as follows about climbing in North America, and beyond:

The summer of 2017 was noted for climate abnormalities that directly affected human well-being and the areas we climb. In the 1980s climbing ice in Utah was reliable, Thanksgiving to Easter. Now Christmas to Presidents’ Day seems to be the norm. The operating seasons of many ski areas are shortened, and rain in the winter is becoming more common. Across the alpine zones, glaciers are receding, becoming increasingly unstable, and certain ice climbs are forming less frequently. . . . In Montana, where I live, the growing season has increased by 12 days a year since the 1950s. The list of climate-triggered change is extensive. The evidence is compelling and something that will affect the sport we love and, more important, affect the world for our and future generations. (Anker 2018)

Barth of course also witnesses, firsthand, environmental degradation in the mountains, albeit in its incipient nineteenth-century manifestation. Though he already voices his reservations about the escalating Erschlossenheit of the Alps, especially of the Wetterstein Range and its highpoint the Zugspitze, he could never have anticipated the extent to which this mountain and its surrounding glaciers would bear both human imprint and (human-
induced) climatic influence. Today the Zugspitze is accessible by two separate cable car systems (one in Austria and one in Germany) as well as by a cog railway that runs for nineteen kilometers and terminates at the end of a 4466-m-long tunnel, where yet another aerial tramway hoists tourists up the final 400 m to the summit. The Wetterstein’s only two glaciers, the Plattachferner and Höllentalferner, both of which Barth aesthetically compared to their more celebrated and sprawling counterparts in the higher ranges of southern Tirol (see Barth 1874, p. 629), are no longer glaciers per se. In fact, the former no longer exists per se but has shriveled to form two unconnected and paltry sheets of ice now called the Nördliche and Südliche Schneeferner. These two surviving remnants will surely disappear altogether within a matter of years. In the meantime, twenty kilometers of (downhill) ski runs, accessible by the aforesaid cable cars and cog railway, offer winter tourists the illusion of glacial grandeur, at least when seasonal snow covers the Plattach basin, which in Barth’s day was filled by the abovementioned 1.2 square-mile active Plattachferner. (Ferner is a Bavarian-Tyrolean word for Gletscher.) This accelerated, anthropocenic-driven recession of glaciers on major German–Austrian massifs such as the Zugspitze and the Dachstein—not to mention around the world—is occurring at a rate far outpacing geological let alone glaciological deep time. To cite Horkheimer and Adorno (1988, p. 9) portentous words once again, here in slightly modified form: “Aber die vollends erschlossene Erde strahlt im Zeichen triumphalen Unheils.”

7. Climatic Conclusions

In “Zwei Septembernächte auf der Hohen Dachsteinspitze,” Simony paraphrases a folksy moralistic tale that Nanni, the local Sennerin who accompanies the crew to the summit (see footnote 10), recounts to her skeptical audience. This tall tale is full of what might best be called “alternative anthropocenic facts,” as they run completely counter to geological and glaciological history:

… und Nanni mußte nun die unter den Bewohnern des Salzkammergutes ziemlich allgemein verbreitete Sage erzählen, daß einst, vor mehr als tausend Jahren, da, wo jetzt ungeheure Eis- und Schneelasten den Boden um den Dachstein bedecken, blühende Matten mit zahlreichen Alpenhütten und die trefflichsten Weideplätze gelegen hatten. Aber die Sennerinnen, von dem reichen Ertrag der Wirtschaft immer übermütiger geworden, lebten ein wüstes, zügelloses Leben und trieben es in ihrem Übermütte endlich so weit, daß sie die Alpenwege, auf welchen die Burschen zu ihnen kamen, mit Butter und Schotten (eine Art Käse) ebneten. Darüber wurde nun Gott böse und ließ auf einmal so viel Schnee fallen, daß Alpen, Kühe und Sennerinnen davon begraben wurden. Und seit jener Zeit ist der Schnee nicht mehr weggegangen, sondern vielmehr gewachsen und nimmt noch alljährlich zu. (Simony 1921, pp. 77–78)

On the other hand, one should not so readily discount the anthropological–psychological effects of what is known as the Little Ice Age, a period of consistently cold temperatures and glacier expansion in Europe (and more generally the Northern Hemisphere) that occurred between the sixteenth to mid-nineteenth centuries,16 precisely when Simony and, slightly later, Barth conducted and recorded their high-Alpine travels. Even more precisely, the coldest year overall in Europe is estimated to have been 1838 (Mann 2002, p. 4) and the “glacial ‘high tide’ in the Alps lasted from about 1590 to 1850” (Fagan 2019, p. 127). Glaciers in fact intermittently advanced into several inhabited valleys, especially in the Chamonix region, endangering entire settlements and terrorizing defenseless villagers. Nanni’s chronicle, a kind of post-Edenic narrative with an Alpine twist, thus provides a simplistic-folkloric explanation of these greater climatological events. In her mind, one still dominated by unenlightened superstition, she and her overindulgent forebears have suffered the consequences of an epochal climatic–cataclysmic punishment.

16 For informative scientific and broader cultural studies of this disruptive climatic interval, see, in chronological order: (Grove 1988; Mann 2002; Fagan 2019).
In more sober scientific terms, the Little Ice Age was a somewhat anomalous event of the Late Holocene, occurring between the Medieval Warm Period (also known as the Medieval Climatic Optimum) and the subsequent warming trend that set in during the twentieth century and has now accelerated into the twenty-first. Whether or not one wishes to invoke newly coined—or perhaps merely new-fangled—terms such as the “Anthropocene,” it remains clear that micro-climatic blips can briefly bend the flatline within the plus longue durée of deep time. As for Hermann von Barth and Friedrich Simony, they both stand in the nineteenth-century midst of this greater geological, or at least climatological, transition. And, as demonstrated in more comprehensive fashion throughout the course of this article, they also stand at the cusp of a more specific geographical and environmental development: the modernized exploration and mechanized exploitation of the Alps.

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