



Conflicting Discourses: Understanding the Rejection of a Swiss National Park Project Using Data Analysis Triangulation

Authors: Michel, Annina Helena, and Bruggmann, André

Source: Mountain Research and Development, 39(1)

Published By: International Mountain Society

URL: <https://doi.org/10.1659/MRD-JOURNAL-D-18-00081.1>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Conflicting Discourses: Understanding the Rejection of a Swiss National Park Project Using Data Analysis Triangulation

Annina Helena Michel* and André Bruggmann

* Corresponding author: annina.michel@geo.uzh.ch

Department of Geography, University of Zurich, Winterthurerstrasse 190, 8057 Zürich, Switzerland

© 2019 Michel and Bruggmann. This open access article is licensed under a Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>). Please credit the authors and the full source.



This article pursues 2 objectives: First, we show how a national park project in the Swiss Alps, Parc Adula, was addressed in contemporary neoliberal discourses on conservation and how these discourses

influenced the rejection of the park. Second, we use triangulation to bridge the gap between 2 data analysis approaches, combining qualitative methods with the quantitative analytical tools of corpus linguistics. This allows an in-depth analysis of discourses surrounding and influencing national park planning. Furthermore, we outline challenges faced by conservation incentives based on discursive gaps and different uses of language in the arguments of government

officials and residents affected by park negotiations. In the case of Parc Adula, these discursive gaps and language differences created distrust and made park planning difficult. This further reinforced a discursive disruption within and between neoliberal understandings of conservation and local discourses, eventually leading to the rejection of the national park project. This paper presents a novel analytical perspective on current conservation issues in Alpine areas and opens up ground for further research on communication practices, their local embeddedness, and their impacts on protected area establishment.

Keywords: Protected areas; mixed methods; discourse analysis; national park; Parc Adula; Switzerland.

Peer-reviewed: January 2019 **Accepted:** April 2019

Introduction

Global change processes, such as neoliberalization and climate change, increasingly affect everyday life in the Alpine regions of central Europe (Boesch et al 2008; Job 2008; Pröbstl-Haider and Pütz 2016; Müller-Jentsch 2017). In Switzerland, many mountain regions struggle with low economic dynamism and population decline, especially in comparison with urban areas. Therefore, it is important to find sustainable ways to strengthen existing sources of income and activate new sources in these economically vulnerable regions (Müller-Jentsch 2017). Swiss federal and cantonal governments financially support economic development projects (in industry and tourism) in rural areas through the federal government's "new regional policy" (SECO 2017). Additionally, regions might also benefit economically from a certification label referring to a protected area (eg "national park" or "regional nature park"). A label is intended to provide market advantages. These can—for example—apply to sustainable tourism or the marketing of regional food produce (Boesch et al 2008; Siegrist et al 2009; Pröbstl-Haider and Pütz 2016).

Conservation in Switzerland

Protected areas are a nature conservation instrument and part of the biodiversity strategy of the Swiss government (BAFU 2018), but they can also function as label regions (eg with the label of a "national park") and influence regional economic development. A national park label can be a sustainability certification that offers possibilities of supporting new products or services, or of strengthening sales of existing products and merchandising (Boesch et al 2008; Knaus et al 2017). Moreover, protected areas can position economically vulnerable regions as tourism destinations, particularly for "soft tourism." This type of tourism is opposed to more intensive mass tourism in urban areas and large mountain resorts. It offers outdoor activities such as hiking or mountaineering (Hammer and Siegrist 2008; Mayer et al 2010; Weber 2013). Protected area tourism can also have indirect effects, such as general infrastructure development (Woltering 2012). Labeling could promote not only increased revenues but also better regional cooperation and greater local acceptance of protected areas (Pröbstl-Haider and Pütz 2016). Woltering (2012) analyzed protected areas in Germany and showed that

economic benefits appear on a medium-to-long time scale and affect the whole society.

Swiss protected area policy changed in 2007 with the Ordinance on Parks of National Importance (hereafter the Parks Ordinance). Before the implementation of this ordinance, the Swiss National Park (established in 1914) was the only large protected area in Switzerland, serving traditional objectives such as nature conservation and research. The Swiss National Park is categorized as a strict nature reserve (the most highly protected category in the International Union for Conservation of Nature's protected area management system), and is regulated by the Federal Act on the Swiss National Park in the Canton of Graubünden. The Parks Ordinance, on the other hand, is part of the Federal Act on the Protection of Nature and Heritage (NCHA). Besides the Parks Ordinance, the NCHA comprises different ordinances regarding cultural and natural landscape protection (eg protected townscapes and wetlands), as well as nature conservation (eg protection of native species) (Swiss Confederation 2017). The Parks Ordinance serves as an overarching policy and supports both landscape protection (regarding natural and cultural traits) and regional economic development. In particular, it contains a section that defines when specific labels can be applied (Hammer and Siegrist 2016; Pütz and Job 2016; Pütz et al 2017). In addition to national parks, the ordinance regulates the establishment and operation of regional nature parks, which have less restrictive management regulations, and nature discovery parks, which are peri-urban protected areas that focus on education (BAFU 2010). The establishment of protected areas is defined as a bottom-up process. A new park project must be initiated locally and supported by the communal councils. The affected communes then vote on the question of whether or not they want to be part of a park in a communal referendum. The federal government evaluates applications for financial support and awards the park label when applicable (Swiss Confederation 2007).

Protected areas as neoliberal conservation

In contrast to a centralized “fortress” conservation model, more dynamic, decentralized, market-oriented, and socially inclusive conservation strategies—such as the one codified in Switzerland's Parks Ordinance—have been termed “neoliberal conservation.” This approach shifts the focus from how nature is used to how nature is conserved through capitalist practices (Büscher and Arsel 2012).

Over the last decade, neoliberal conservation approaches have been extensively debated in the social sciences (Castree 2008a, 2008b; Brockington and Duffy 2010; Igoe et al 2010; Holmes and Cavanagh 2016). But the link between capitalism and conservation has existed since the first national parks were established

(Brockington and Duffy 2010; Igoe et al 2010). Capitalist actors have increasingly profited from the commodification of nature in nonextractive ways (Büscher 2013). Moreover, environmental conservation has been pushed to become not only compatible with capitalism but also a source of economic growth (Büscher and Arsel 2012: 131). This push can be defined as neoliberal conservation, a group of ideologies characterized by practices and discourses such as financialization, marketization, privatization, commodification, and decentralization of conservation governance (Holmes and Cavanagh 2016). Its implementation is often accompanied by increased government intervention, contrary to the assumption that the state is retreating under neoliberalism (Bakker 2015). Capitalist terms are reevaluated so that nature can be preserved only through its subjection to capital (Büscher and Arsel 2012); McAfee (1999) has described this as “selling nature to save it.”

Such an approach requires networks and partnerships between capitalism and conservation, whose development is also reflected in the role of philanthropy in conservation and the growth of large conservation nongovernmental organizations (NGOs). These then reshape nature and society in ways that produce new types of value for capitalist expansion and accumulation (Igoe et al 2010; Holmes 2012; Holmes and Cavanagh 2016). Connectivity as a premise for economic success is also a driver of contemporary capitalist ideology. Boltanski and Chiapello (2018) noted the emerging importance of activity, self-realization, networks, and mobility as shaping contemporary central European societies. This is also reflected in transformations of neoliberal conservation, which are driven by networks of interests and mobilization of money, political resources, and discourses (Igoe et al 2010; Holmes 2012; Holmes and Cavanagh 2016).

The concept of neoliberal conservation is ambiguous. Especially, environmental ethics (conserving nature for its own sake) and cost-benefit considerations reflect competing discourses, resulting in a complex and multilayered discursive construct (Fletcher 2010; Büscher et al 2012). In Switzerland, the ambiguity of this approach to conservation shows in the fact that the Parks Ordinance is part of the Federal Act on the Protection of Nature and Cultural Heritage, whereas new protected areas, especially regional nature parks, are perceived and discussed as a means for regional economic development (Knaus and Backhaus 2014). The case of the Parks Ordinance also corresponds to Bakker's (2015) description of neoliberalism as being accompanied by reregulation.

This article analyzes these ambiguous and entangled neoliberal conservation discourses and their empirical implications. We focus on a case study in the Swiss Alps: the effort to create a national park called Parc Adula, which was rejected by voters in late 2016. The project was

placed within current ideologies and multilayered discourses of neoliberal conservation. For instance, proponents promoted it as an economic opportunity for a disadvantaged Alpine region.

The article also demonstrates the use of methodological transdisciplinarity to analyze protected-area discourses. We combine quantitative data analysis methods from corpus linguistics, as used in critical discourse analysis (Glasze and Mattissek 2009), with qualitative coding (Mayring 2010, 2014), and apply both to qualitative interview data. We explore and bridge the shifting and contested boundary between these analytical approaches (Philip 1998; Barnes 2009; Wiedemann 2016; O'Sullivan et al 2018). This methodological triangulation allows an in-depth analysis of discourses related to the neoliberal approach to conservation and their influence on the outcome of the Parc Adula referendum.

The failure of the Parc Adula project

Parc Adula (central Adula peak: 46°29'N, 9°2'E) was intended to be the first Swiss national park established under the Parks Ordinance. Due to its substantial elevation range (from 397 to 3402 m), the area has diverse landscapes and ecosystems (Parc Adula n.d.). The Greina high plateau at its center is a popular hiking and mountaineering destination (BAFU 2017).

After 16 years of planning, the park project was rejected in a commune-level referendum held in November 2016. Figure 1 shows a map of the proposed park boundaries, the communes affected, and the results of the referendum.

In the 2 years preceding the vote, discussions and negotiations on the park took place on several levels, from local communities to cantonal and federal government bureaus. Our interviews were conducted shortly before the publication of the Charta, a management plan that was released in late 2015 (Reutz et al 2016). Interviewees hoped to receive more information about the park project, especially about possible restrictions within the park's core zone.

Methodological approach

We analyzed discourses on conservation and regional development, defining discourse as a product of individual and supra-individual components (Jäger 2001). The latter component refers to the understanding that discourses might not be controlled by single individuals or groups and can thus “transport more knowledge than the single actor is aware of” (Jäger and Maier 2016: 118). This definition recognizes both the influence of discourse on human action and the individual's scope for action (Reuber and Pfaffenbach 2005). Jäger (2001) analyzed discourses as consisting of different interacting discourse threads, which are in turn composed of discourse

fragments, defined as thematically cohesive parts of a discourse. These fragments can be referred to on different discourse levels, which reflect the social context of a discourse (Reuber and Pfaffenbach 2005).

We triangulated different analytical techniques (Figure 2) to understand discourses, discourse threads, and discourse fragments. We understand triangulation in line with Kelle and Erzberger (2004: 174) as “an enlargement of perspectives that permit a fuller treatment, description and explanation of the subject area.” Thus, we combined qualitative and quantitative analyses—applied to qualitative interview data—because we consider their different epistemological underpinnings to be mutually enhancing (Madill et al 2000; Yilmaz 2013) and strive for credibility and confirmability of qualitative data and analysis (Lincoln and Guba 1985).

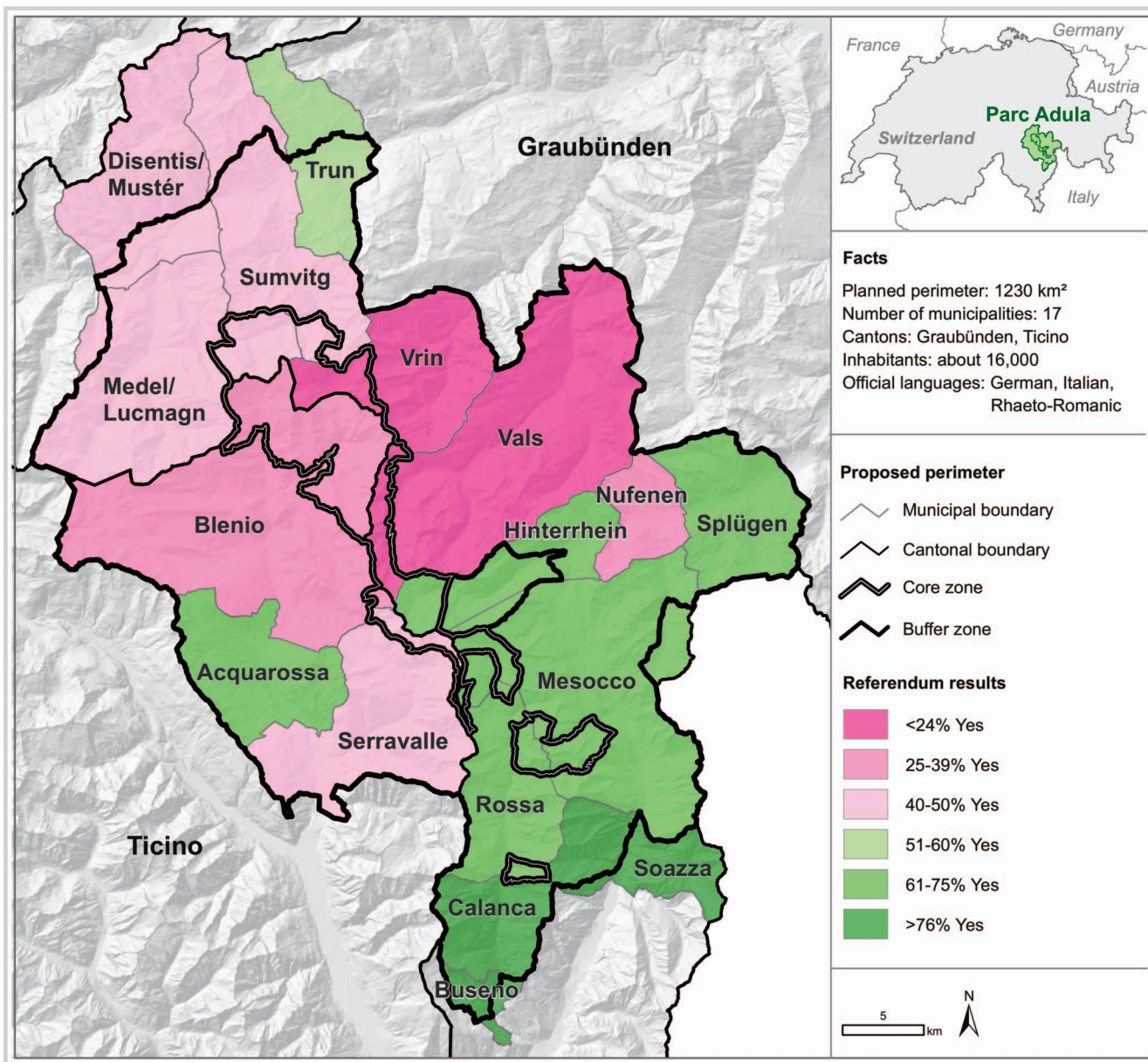
To understand discursive structures, we first analyzed our interview data using lexicometry and corpus linguistics and took into account the ambiguity and instability of meaning (Dzudzek et al 2009). We also used interpretative coding to identify patterns and connections within interview data and to better understand social realities, thus deepening the understanding provided by the linguistically superficial quantitative analysis (Glasze et al 2009).

Data collection and processing

To understand park planning discourses, we used different interviewing methods. We aimed for a closed text corpus as the basis of quantitative analyses, which calls for stable conditions of data acquisition (Glasze and Mattissek 2009). To this end, we conducted 16 problem-centered interviews (Flick 2005) in summer 2015 with actors belonging to the park project management team (hereafter “park management”), government, and NGOs, as well as with local residents who were not formally involved in park project management or planning. These interviews covered questions of park expectations and goals, park planning, and current discourses in the park area. Interview length ranged between 50 and 120 minutes. Of the 16 interviews, 9 were recorded. Seven interviews were not recorded, either because it was assumed that the interviewees would feel more comfortable with a less formal procedure or because they took place during or after participatory observations where recording would have been disruptive. For these interviews, notes were taken instead.

The interviews were transcribed as nearly to verbatim as possible. During transcription, the interviews were directly translated from Swiss-German dialect to high German, and the word order was slightly adjusted. The quotations used in this article were translated into English as closely to the German wording as possible, aiming for adequate sentence structures while still preserving specific modes of expression and meanings. We evaluated the

FIGURE 1 Results of the referendum on Parc Adula, 27 November 2016, by commune. (Map by Michel 2019; geodata copyright Federal Office of Topography, Swiss Parks Network)



quotations and ensured accuracy by translating them back into German, which is a common procedure when translation is used in such research.

Extended ethnographic fieldwork was also conducted in 2015 and 2016 using participatory and nonparticipatory observation and open conversations (Angrosino 2007), which provided contextual data that were used to better understand planning procedures of Parc Adula, as well as other ongoing discussions in the affected valleys. Ethnographic data allow better assessment of emotions, perceptions, and everyday practices in the villages, and thus a more nuanced understanding and contextualizing of interview outputs.

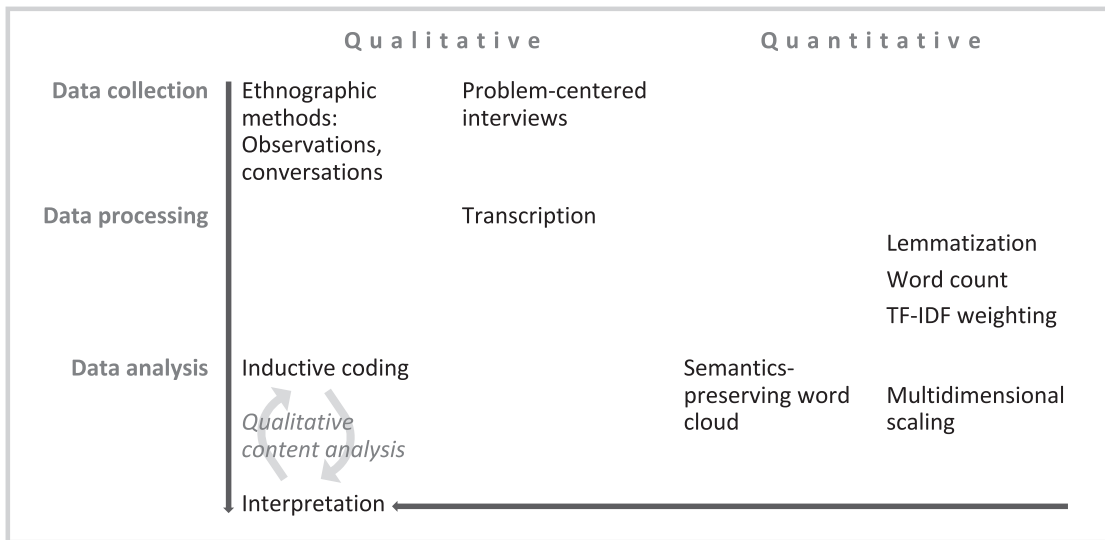
Data analysis

The data analyzed in the following sections were the interview transcripts in German (directly translated from Swiss German dialect), whereas analysis outputs were then translated into English.

Lexicometry

First, we obtained a quantitative measure of the similarity of the 16 interview transcripts. Using TreeTagger software (Schmid 1999), we lemmatized all texts. This reduced words to their base form, which allows different

FIGURE 2 Methods for triangulation of data analysis.



inflectional forms of a word (eg parks and park) that have the same meaning to be treated as a single word. We referred to the Natural Language Toolkit stop-words list containing 231 high-frequency German words (Bird et al 2009) and automatically removed predefined stop words with little lexical content (eg the, and, be) with Python scripting language, since these words fail to distinguish texts from one another. Next, we assessed the frequency of words used in the interview texts (Manning et al 2008).

Figure 3 shows the most frequent words arranged in a word cloud. We used a semantics-preserving word cloud

tool (Barth et al 2013) to depict the most frequent common and proper nouns and cluster the words according to their similarity and semantic meaning. The font size of the words reflects absolute frequencies (*n*). The words are positioned based on multidimensional scaling (MDS), which places words with high co-occurrence in the interview transcripts closer to one another. The semantic similarities are calculated using cosine similarity function and are represented by different colors. Therefore, semantic clusters might overlap with the similarity clusters based on MDS (Barth et al 2013).

FIGURE 3 Word cloud based on absolute noun frequency and semantic similarity.



The most frequent word was *park* [Park] ($n = 141$), followed by *people* [Leute] ($n = 113$), *canton* [Kanton] ($n = 99$), *year* [Jahr] ($n = 98$), *region* [Region] ($n = 82$), *national park* [Nationalpark] ($n = 80$), *project* [Projekt] ($n = 73$), and *question* [Frage] ($n = 72$). *Parc* ($n = 70$) and *Adula* ($n = 72$) were mostly used as one term, a few times individually, although referring to the same name. Therefore, frequencies were calculated separately for the 2 words of the proposed park's name.

Multidimensional scaling

The focus of the next step in the analysis moved from relations between words to relations between interview texts. We transferred the information gained from the word count to a matrix consisting of vectors representing the word frequencies for each interview text. First, a term frequency-inverse document frequency (TF-IDF) weighting scheme was applied to consider the characteristics of the text corpus (Manning et al 2008). This weighting scheme assigns words that are very rare in the entire corpus a higher weight for an individual text than words that are very common in the corpus. Therefore, terms with the highest TF-IDF score are often “the terms that best characterize the topic of the document” (Rajaraman and Ullmann 2011: 8). Subsequently, we compared the 16 TF-IDF normalized vectors using cosine similarity (Ellis et al 1993). All steps described in this paragraph were computed automatically in Python scripting language.

Next, we employed MDS using SPSS 23 software to generate a visual output that places similar objects (interview texts) close to one another and dissimilar objects farther apart. The 2 dimensions correspond to object attributes that order the input data and can help the interpretation of interview text content and context (Borgatti 1997; Backhaus et al 2011).

Figure 4 shows a 2-dimensional MDS plot of the text corpus, which allows visual assessment of the semantic similarities and differences of the interview (I) texts. Dimension 1 shows the most variation. One distinct cluster (I8–I16) is clearly visible compared to the more dispersed positions of I1–I7, resulting in a stress value of 0.24 and low goodness of fit (Bühl 2008). The varying text structure of recorded (I8–I16) and nonrecorded (I1–I7) interview transcripts, especially the less verbatim nature of the latter, explains these clusters. Since the cluster of I8–I16 was reasonably tight, we decided to rerun the MDS on this submatrix to achieve a model with greater homogeneity and thus better goodness of fit and lower stress value (stress = 0.14). This submatrix was considered more reliable and thus analyzable, since the corpus was more stable due to data processing methods. The results are shown in Figure 5. The functions and backgrounds of interviewees correspond to the MDS output. I8 to I11 are local residents with various backgrounds and agendas. I14

to I16 work for cantonal government agencies and live in the main town of the canton. I12 and I13 are federal government representatives with no personal connection to the proposed park region. Dimension 2 does not provide further insights into interview data.

Qualitative coding and analysis

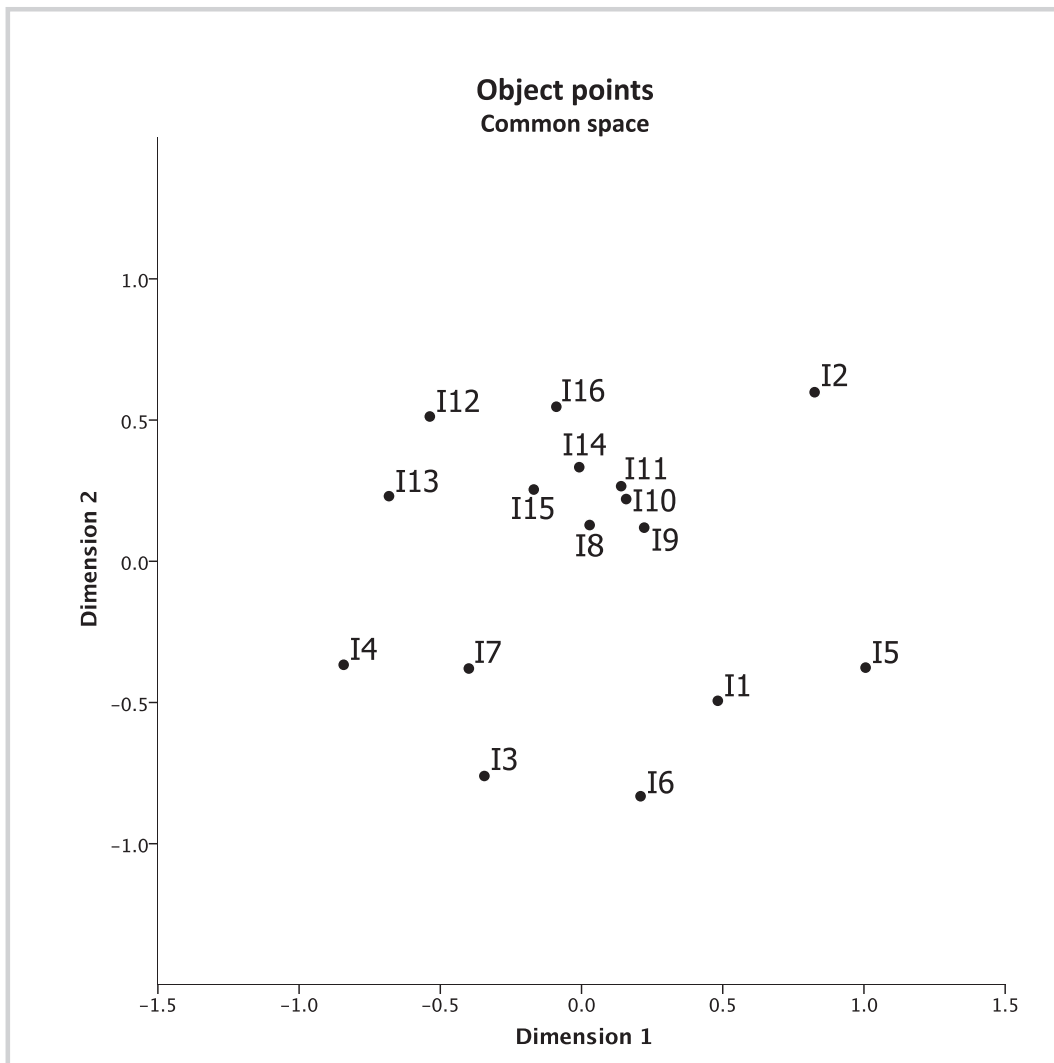
Whereas quantitative analysis provides limited insight into contents and meanings of the data, such as opinions regarding Parc Adula, qualitative coding and interpretation can help to better locate and understand discourses about the park proposal. For instance, word frequency does not necessarily indicate importance. Through coding, we can place statements into a broader context, understand their importance within discourses, and identify connections in systems of meaning. Thus, we can understand narrative patterns or story lines within the interview data (Glasze et al 2009).

All interview data were coded inductively, whereby the “aim is to summarize categories directly, which are coming from the material itself, not from theoretical considerations” (Mayring 2014: 79). The inductively formed codes allow an in-depth analysis of interview data while reducing bias formed by presuppositions. The coding was conducted using MaxQDA analysis software. The most frequent codes and subcodes, with a sample quote for each, were compiled in a codebook (Table 1). To understand code relations and to better contextualize discourses, we also composed a diagram, showing the most common codes and subcodes and their co-occurrence with other codes, using MaxQDA software (Figure 6).

Discussion: Neoliberal discourses, communication, and park rejection

Parc Adula was embedded in and shaped by different discourses, in which neoliberal conservation discourses were ever present. These consisted not only of discourse fragments such as added value or economic upturn, but also of interacting discourse threads that shape the park project as a whole: project management, regional economic development, tourism, labeling, and marketing—emphasizing the multiplicity and complexity of protected area discourses. Table 1 and Figure 6 further outline these threads—in which, for example, the most frequent subcode of *pro-park argument* is *regional development*, which has a high co-occurrence with *added value*, a term that was frequently used in interviews as well as information events about Parc Adula. Besides park promoters and various government representatives, pro-park local residents also anticipated that the park would bring an economic upturn. However, the park negotiations were much more complex and were influenced by other discourses, as shown in Table 1, such as local events in the village or hunting practices (see also

FIGURE 4 Two-dimensional MDS plot of all interviews (recorded and nonrecorded).



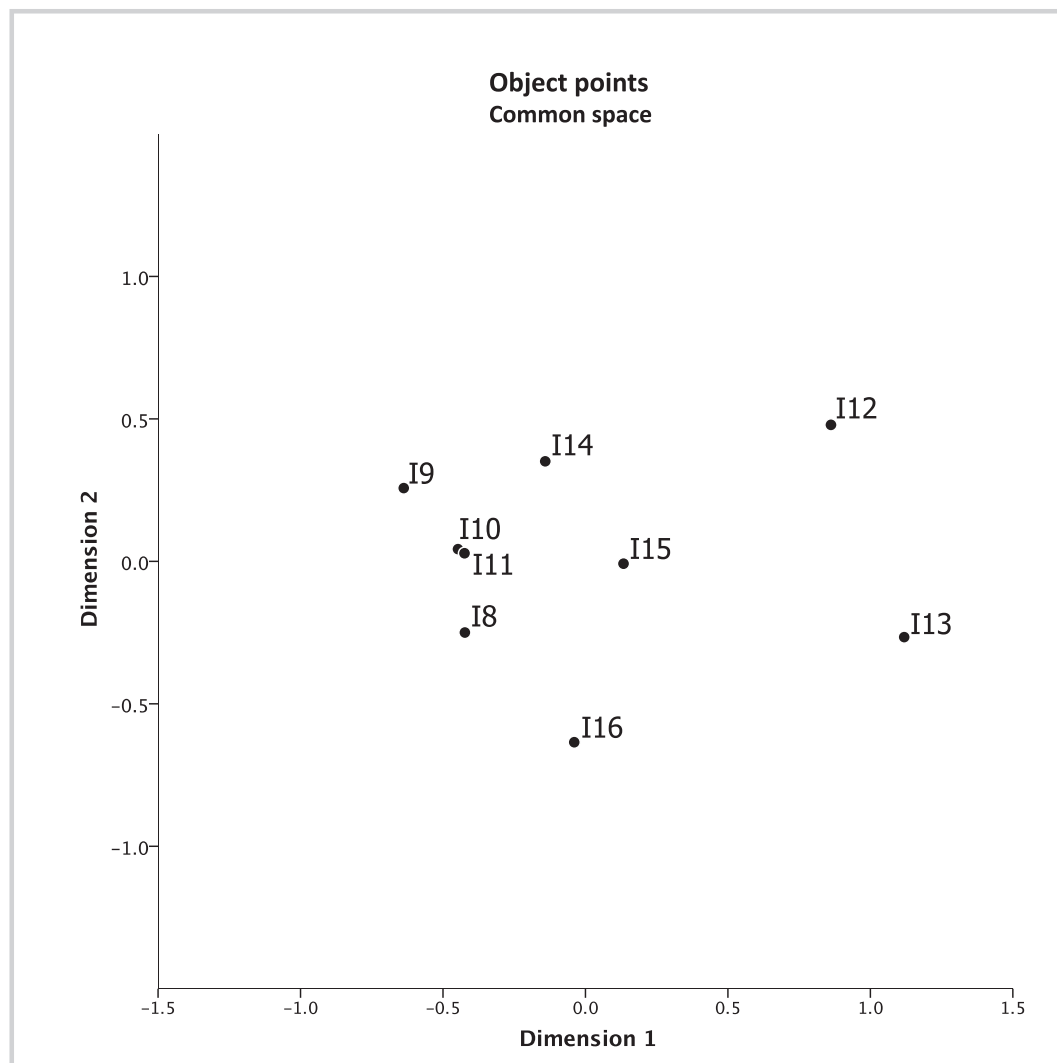
Michel 2019; Michel and Backhaus 2019). Büscher et al (2012) described such somewhat contradictory discourses as a major part of neoliberalism's attractiveness, since they show its ability to hybridize and stimulate consensus-driven discourses, which serves to legitimize neoliberal conservation strategies.

Park proponents mobilized neoliberal conservation discourses to achieve agreement between people with diverse backgrounds, agendas, and opinions. The focus was on promoting local initiatives that often connected cultural heritage preservation with economic potential, especially in the soft-tourism sector. This promises a win-win solution for nature, local businesses, and heritage protection (Grandia 2007; Igoe and Brockington 2007). In the Parc Adula discourse, this promise is entangled in different and conflicting discourse levels, types of

discourses (eg scientific and nonspecialist), and discourse threads (eg sustainable economic development and heritage) (Jäger 2001; Reuber and Pfaffenbach 2005).

Another neoliberal discourse thread reflected in the Parc Adula case is project-based planning and financing, which leaves room for constant activity, adjustments, and change (Boltanski and Chiapello 2018). Projects are a way to decentralize conservation and enable local businesses and individuals to actively participate (Igoe and Brockington 2007). Project-based planning also makes it possible to adjust funding schemes or marketing strategies on a shorter time horizon. While it is common in many jobs and economic areas, it might still alienate people when transferred to other contexts (see Boltanski and Chiapello 2018). This shows the empirical complexity of

FIGURE 5 Two-dimensional MDS plot of the recorded interviews.



protected area discourses in our case, which will be further analyzed in the following sections.

Same discourse, different language

The quantitative analysis indicated different semantic areas used in the interviews. We hypothesized that the 3 clusters outlined by the semantic word cloud (Figure 3) correspond with discourse levels. The green cluster consists of words corresponding to a larger scale, which can be linked to federal and cantonal politics and planning, and also contains managerial terms used to describe regulations of the park project. The purple cluster represents a regional scale, the scale on which Parc Adula was mostly planned, and the orange a local scale. The latter features more affective words that might indicate a more local embeddedness and subjective perceptions.

However, some presumably similar words, such as *area* and *region*, are not as related based on semantic similarity calculations. This might point to specific, context-dependent use of the terms, or to a translation bias. The context-dependent use of terms is backed up by the 3 clusters in the MDS (Figure 5), which show how interviewees with different vocational backgrounds and origins used different language. This disruption may have been the source of some objections to the park. Schenk et al (2007: 73) noted that some Swiss farmers reject conservation measures “not because they disagree with the concrete aims, but because they object to the way in which the information is transmitted.” Farmers critical of the Parc Adula project mostly feared more interference, from government and especially from environmental NGOs. Haggemacher (2017) noted that some local farmers described the expectation that in the future, academics would influence decisions made regarding the

TABLE 1 Most frequently occurring codes and subcodes with examples.

Parent code	Subcode	Sample quote
Procedure/organization	Challenges regarding organization of stakeholders	It is a tricky perimeter. Two cantons, 2 languages—3 languages with Romansh. Multiple regions, several totally different cultures. This is naturally a challenge. (I14)
Discussions about the core zone	Hunting	I think [hunting] still has to be possible in the park. . . . There is—maybe one time [a season] when a hunter is on the hunt in the area, where it concerns the municipality of Vals. That—well, it is surely no issue. (I11)
Communication between park management and local residents	Lack of communication	I think information and facts are still missing. So that you can really form your opinion. (I9)
Propark argument	Regional development	These label regions help economically underdeveloped regions to distinguish themselves . . . and to position themselves in a market. (I12)
Tourism (general)	Tourism in Vals	We will attract a totally different audience with Parc Adula than we do just with the spa and architecture. And therefore, we have a value added, which I see as a possibility. . . . It just has to be compatible. The question is, is this the case? Does it match? (I9)
Antipark argument	Restrictions	The approach is not wrong. But you just see from the population in these areas there—some became a little skeptical towards this prohibition strategy, this park strategy. (I16)
Discourses and setting in Vals	Fear	The situation that is present here in the village since quite some time, with the fight about the thermal spa and the spa hotel, . . . contributes a lot to people not saying out loud what they think, out of fear. Fear is a very big issue here in the village. (I10)
Added value	Park as a label	And in the buffer zone, regional development is priority. There, the Adula region can be positioned as a destination. But—there are already many labels, which is a challenge. (I3)
Landscape value	Understanding of nature/landscape	Pristine, authentic, pure—these are romanticized points of view that only developed through distance. People who live in nature don't say things like that. (I4)

daily business of Parc Adula. Often, such academic experts—for example, from government agencies—were present at information events to answer questions.

Thus, even if people were engaging with the same discourse, different vocabularies caused a disruption. For instance, local discourse regarding *added value* and *revenues* in the villages did not use the same language as its counterpart on a different discursive level. An interviewee explained his view on the differences in the meaning of landscape for people from the rural commune of Vrin and people from more urban areas: “The people in Vrin talk differently. For them, a meadow is a meadow and a hillside is a hillside” (I4). This statement also gives more context to the quotation of interviewee I4 in Table 1, which connects a person's perception of landscape with the person's place of origin. According to this, it is not only language that is different, but also the content of discourses, which widens the discursive gap, as discussed below.

Different discourses, different language

In addition to the disruption created by terminology, opposing discourses (differences in contents or discourse fragments) also created disruption. For instance, the discourse that the park was needed to overcome structural economic disadvantages and declining tourism was not always agreed to by local residents. As one local resident (I5) said, “Of course, there will be even more guests [if the park is established], but we already have good occupancy rates as it is.” This created another obstacle for park promoters by undermining a key propark rationale (which is backed by government bureaus as well as scientists). Another interviewee (I3) expressed a similar doubt about the usefulness of a new national park product label, since there are already other labels on the market—for example *organic* and *protected designation of origin*. These 2 statements are part of a contradictory discourse fragment, opposing the fragment built on political and science-based arguments regarding the need for regional economic development (see Knaus et al 2017; Müller-Jentsch 2017).

opposition to the park. Contrasting discourses based on different conceptions of justice also played a vital role in the rejection of Parc Adula (Michel 2019).

Communication challenges

The qualitative analysis confirmed the importance of communication in protected area planning and implementation. Even though the importance of effective communication and genuine participation to the acceptance of protected areas is well known (Stoll-Kleemann 2001; Schenk et al 2007; Hammer and Siegrist 2008; Stern 2008a), the quantitative analysis (see Figure 5) and especially the ethnographic data showed that the park promoters did not proactively adopt language that was in tune with the more emotion-led local discourses. Rather, they reacted defensively to critiques based on fear of restrictions or interference from urban outsiders (see Michel 2019). The high co-occurrence of the subcodes *fear* and *idea from outside* (Figure 6) confirms the effect of this perception. Such perceptions were often tied to the assessment of park promoters as untrustworthy (see Stoll-Kleemann 2001; Stern 2008a, 2008b), which was also an important antipark rationale.

Communication challenges were an important topic in all the interviews, as can be seen in the importance of the code *communication between park management and local residents* (Table 1). In particular, the local residents interviewed felt that they had not received enough information about the proposed park at the time the interviews were conducted. This perception was strongly linked to antipark arguments, as shown by the high co-occurrence of the codes *lack of communication* and *contrapark argument* in Figure 6. Communication problems and perceived lack of information were not discussed by interviewees who were already positively inclined toward the park, but rather presented as contrapark arguments by the people who were undecided or opposed. Among the participants in the interviews used in our analysis, 10 were eligible to vote in the referendum, and 4 of the 10 remained undecided at the time of the interviews.

The most frequent subcode of *organization/procedure, challenges regarding cooperation of stakeholders*, showed a strong co-occurrence with *communication challenges*. Interviewee I14 highlighted the challenges arising from the proposed park's culturally diverse setting, showing how entangled the discourse threads were.

The interaction of language, discourses, rumors, and perceptions of trustworthiness led to a difficult situation for park planning, which further reinforced a discursive disruption within and between neoliberal understandings of conservation and local discourses. The promoters were not able to refute all the rumors and misconceptions before the public vote in 2016.

Conclusion

Parc Adula is an example of a complex, multilayered political project driven by contemporary neoliberal ideology. The quantitative analytical tools of corpus linguistics and lexicometry enabled us to focus on the linguistic and discursive structures of interview data and helped to identify topics that would not have been evident from qualitative coding. Nevertheless, qualitative coding was necessary to understand contents, connections, and meanings behind word frequencies and to reflect on the broader context. Quantitative analysis can be of value for constructivist epistemological approaches to qualitative social research by strengthening the confirmability and credibility of research outcomes (Lincoln and Guba 1985; Yilmaz 2013). As Miles and Huberman (1994: 10) noted, "The strengths of qualitative data rest on the competence with which their analysis is carried out." Thus, the 2 approaches complement each other and form an interesting overlap between often-separate disciplines. Applying 2 distinct data analysis procedures helped to untangle levels of discourse influencing the Parc Adula outcome. We found a gap between scientific and political discourses and local discourses. Additional challenges arose when people used different language when talking about similar topics.

There has been a shift in conservation policies in Switzerland from a top-down to a bottom-up, project-driven approach, and connectivity and networking have become important neoliberal values in park planning and management. Different discourses, which are also influenced by the broad goals of Swiss park policies, interact and sometimes contradict each other, which makes the establishment of national parks more difficult. The extent to which neoliberal conservation discourses appeal to local residents is questionable, since the discursive ambiguity they entail is hard to transfer into local discursive threads. Voters were obviously not convinced of the benefits of the park.

This finding supports critiques of neoliberal conservation, especially regarding "the view of human behavior upon which this neoliberalisation is often predicated, which describes individuals as self-interested rational actors who respond first and foremost to economic incentives" (Fletcher 2010: 172). In fact, economic discourses were challenged by locally rooted discursive threads, for instance the general doubt expressed against propark justifications by nonlocal scientists or government employees. These discursive threads are by no means novel in central European conservation negotiations: they already characterized debates during the establishment of the Swiss National Park at the beginning of the 20th century, as described by Kupper (2012, 2016), for example. Therefore, conservation undertakings must be based on truly local, common goals and values, and communication must be

thoroughly participatory and use everyday language (see Michel 2019; Michel and Backhaus 2019). Regarding the results of our data analysis, in addition to the observation that at public information events, government and academic experts' answers to questions often triggered resentment, we propose that a more nuanced and horizontally organized communication strategy be developed. This should especially include local residents who publicly present park goals and also answer the questions and uncertainties of other residents.

Although Parc Adula was situated in a specific context of Swiss direct democracy, the empirical and discursive

complexities of neoliberal conservation projects are expected to be repeated in other European and alpine contexts—especially considering the broader shift of protected area establishment and governance toward more participatory and bottom-up approaches (Hammer et al 2012; Mace 2014). This study opens up ground for further research on communication and participation practices, their local embeddedness, and their impacts on protected-area establishment in order to better understand neoliberal conservation discourses in Alpine areas as well as other regions.

ACKNOWLEDGMENTS

We would like to thank the 2 anonymous reviewers for their helpful advice. We also thank Prof Dr Norman Backhaus for his valuable comments during the preparation of this article. This study is funded by the Swiss National Science

Foundation, Project 10001A_152785 9: Morality and the Development of National Parks: Social and Political Negotiations in Abel Tasman National Park (New Zealand) and in Park Adula (Switzerland).

REFERENCES

- Angrosino M.** 2007. *Doing Ethnographic and Observational Research*. Flick U, editor. London, United Kingdom: Sage.
- Backhaus K, Erichson B, Plinke W, Weiber R.** 2011. *Multivariate Analysemethoden. Eine anwendungsorientierte Einführung*. 13th edition. Berlin/Heidelberg, Germany: Springer.
- BAFU [Bundesamt für Umwelt].** 2010. Faktenblatt Pärkepolitik: Auftrag und Rolle des BAFU. <https://www.news.admin.ch/news/message/attachments/20191.pdf>; accessed on 28 August 2018.
- BAFU [Bundesamt für Umwelt].** 2017. BLN 1913 Greina-Piz Medel. <https://data.geo.admin.ch/ch.bafu.bundesinventare-objekte/2017revision/nr1913.pdf>; accessed on 28 August 2018.
- BAFU [Bundesamt für Umwelt].** 2018. Pärke von nationaler Bedeutung. <https://www.bafu.admin.ch/bafu/de/home/themen/landschaft/fachinformationen/landschaftsqualitaet-erhalten-und-entwickeln/landschaften-von-nationaler-bedeutung/paerke-von-nationaler-bedeutung.html>; accessed on 17 September 2018.
- Bakker K.** 2015. The limits of “neoliberal natures”: Debating green neoliberalism. *Progress in Human Geography* 34(6):715–735.
- Barnes TJ.** 2009. “Not only...but also”: Quantitative and critical geography. *Professional Geographer* 61(3):292–300. <http://dx.doi.org/10.1080/00330120902931937>.
- Barth L, Kobourov SG, Pupyrev S.** 2013. *An Experimental Study of Algorithms for Semantics-Preserving Word Cloud Layout*. Tucson, AZ: University of Arizona.
- Bird S, Klein E, Loper E.** 2009. *Natural Language Processing with Python*. Sebastopol, Russian Federation: O'Reilly Media.
- Boesch M, Renner E, Siegrist D.** 2008. “Brandscaping”: From traditional cultural landscapes to “label regions.” *Mountain Research and Development* 28(2):100–104. <http://dx.doi.org/10.1659/mrd.0950>.
- Boltanski L, Chiapello E.** 2018. *The New Spirit of Capitalism*. 2nd edition. London, United Kingdom and Brooklyn, NY: Verso.
- Borgatti SP.** 1997. Multidimensional scaling. <http://www.analytictech.com/borgatti/mds.htm>; accessed on 19 September 2018.
- Brockington D, Duffy R.** 2010. Introduction: Capitalism and conservation: The production and reproduction of biodiversity conservation. *Antipode* 42(3):469–484. <http://dx.doi.org/10.1002/9781444391442>.
- Bühl A.** 2008. *SPSS 16. Einführung in die moderne Datenanalyse*. 11th edition. Munich, Germany: Pearson Studium.
- Büscher B.** 2013. Nature on the move: Capital, circulation and the value of fictitious conservation. *New Proposals: Journal of Marxism and Interdisciplinary Inquiry* 6(1–2):20–36.
- Büscher B, Arsel M.** 2012. Introduction: Neoliberal conservation, uneven geographical development and the dynamics of contemporary capitalism. *Tijdschrift voor Economische en Sociale Geografie* 103(2):129–135. <http://dx.doi.org/10.1111/j.1467-9663.2012.00712.x>.
- Büscher B, Sullivan S, Neves K, Igoe J, Brockington D.** 2012. Towards a synthesized critique of neoliberal biodiversity conservation. *Capitalism, Nature, Socialism* 23(2):4–30. <http://dx.doi.org/10.1080/10455752.2012.674149>.
- Castree N.** 2008a. Neoliberalising nature: The logics of deregulation and reregulation. *Environment and Planning A* 40(1):131–152. <http://dx.doi.org/10.1068/a3999>.
- Castree N.** 2008b. Neoliberalising nature: Processes, effects, and evaluations. *Environment and Planning A* 40(1):153–173. <http://dx.doi.org/10.1068/a39100>.
- Dzudzek I, Glasze G, Mattissek A, Schimmel H.** 2009. Verfahren der lexikometrischen Analyse von Textkorpora. In: Glasze G, Mattissek A, editors. *Handbuch Diskurs und Raum. Theorien und Methoden für die Humangeographie sowie die sozial- und kulturwissenschaftliche Raumerforschung*. Bielefeld, Germany: transcript Verlag, pp 233–260.
- Ellis D, Fumer-Hines J, Willett P.** 1993. Measuring the degree of similarity between objects in text retrieval systems. *Perspectives in Information Management* 3(2):128–149.
- Fletcher R.** 2010. Neoliberal environmentalism: Towards a poststructuralist political ecology of the conservation debate. *Conservation and Society* 8(3):171–181. <http://dx.doi.org/10.4103/0972-4923.73806>.
- Flick U.** 2005. *Leitfaden-Interviews. In: Qualitative Sozialforschung. Eine Einführung*. 3rd edition. Reinbek bei Hamburg, Germany: Rowohlt Taschenbuch Verlag, pp 117–167.
- Glasze G, Hussein S, Mose J.** 2009. Kodierende Verfahren in der Diskursforschung. In: Glasze G, Mattissek A, editors. *Handbuch Diskurs und Raum. Theorien und Methoden für die Humangeographie sowie die sozial- und kulturwissenschaftliche Raumerforschung*. Bielefeld, Germany: transcript Verlag, pp 293–314.
- Glasze G, Mattissek A.** 2009. *Handbuch Diskurs und Raum. Theorien und Methoden für die Humangeographie sowie sie sozial- und kulturwissenschaftliche Raumerforschung*. Bielefeld, Germany: transcript Verlag.
- Grandia L.** 2007. Between Bolivar and bureaucracy: The Mesoamerican Biological Corridor. *Conservation and Society* 5(4):478–503.
- Haggenmacher M.** 2017. *Landwirtschaft und Naturschutzprojekte. Eine Untersuchung zu Wahrnehmung der Landwirtinnen und Landwirte am Beispiel des Nationalparkprojekts Parc Adula*. Zurich, Switzerland: University of Zurich.
- Hammer T, Mose I, Scheurer T, Siegrist D, Weixlbaumer N.** 2012. Societal research perspectives on protected areas in Europe. *eco.mont* 4(1):5–12. <http://dx.doi.org/10.1553/eco.mont-4-1s5>.
- Hammer T, Siegrist D.** 2008. Protected areas in the Alps. The success factors of nature-based tourism and the challenge for regional policy. *GAIA* 17(1):152–160. <http://dx.doi.org/10.14512/gaia.17.S1.13>.
- Hammer T, Siegrist D.** 2016. Regional change management and collaborative regional governance as approaches tackling regional and global change in parks? Lessons learned from the Swiss model of parks of national significance. In: Hammer T, Mose I, Siegrist D, Weixlbaumer N, editors. *Parks of the Future. Protected Areas in Europe Challenging Regional and Global Change*. München, Germany: oekom, pp 85–100.

- Holmes G.** 2012. Biodiversity for billionaires: Capitalism, conservation and the role of philanthropy in saving/selling nature. *Development and Change* 43(1):185–203. <http://dx.doi.org/10.1111/j.1467-7660.2011.01749.x>.
- Holmes G, Cavanagh CJ.** 2016. A review of the social impacts of neoliberal conservation: Formations, inequalities, contestations. *Geoforum* 75:199–209. <http://dx.doi.org/10.1016/j.geoforum.2016.07.014>.
- Igoe J, Brockington D.** 2007. Neoliberal conservation: A brief introduction. *Conservation and Society* 5(4):432–449.
- Igoe J, Neves K, Brockington D.** 2010. A spectacular eco-tour around the historic bloc: Theorising the convergence of biodiversity conservation and capitalist expansion. *Antipode* 42(3):486–512. <http://dx.doi.org/10.1111/j.1467-8330.2010.00761.x>.
- Jäger S.** 2001. *Kritische Diskursanalyse. Eine Einführung*. Duisburg, Germany: Edition DISS.
- Jäger S, Maier F.** 2016. Analysing discourses and dispositives: A Foucauldian approach to theory and methodology. In: Wodak R, Meier M, editors. *Methods of Critical Discourse Studies*. Los Angeles, CA: Sage, pp 109–136.
- Job H.** 2008. Estimating the regional economic impact of tourism to national parks. *GAIA* 17(1):134–142. <http://dx.doi.org/10.14512/gaia.17.S1.11>.
- Kelle U, Erzberger C.** 2004. Qualitative and quantitative methods: Not in opposition. In: Flick U, von Kardorff E, Steinke I, editors. *A Companion to Qualitative Research*. London, United Kingdom: Sage, pp 172–177.
- Knaus F, Backhaus N.** 2014. *Touristische Wertschöpfung in Schweizer Parks*. Swiss Academies Factsheets 9(3). Bern, Switzerland: Akademien der Wissenschaften Schweiz.
- Knaus F, Bonnelame LK, Siegrist D.** 2017. The economic impact of labeled regional products: The experience of the UNESCO Biosphere Reserve Entlebuch. *Mountain Research and Development* 37(1):121–130. <http://dx.doi.org/10.1659/MRD-JOURNAL-D-16-00067.1>.
- Kupper P.** 2012. *Wildnis schaffen. Eine transnationale Geschichte des Schweizerischen Nationalparks*. Bern, Switzerland: Haupt.
- Kupper P.** 2016. Die Parkbewegung. In: Mathieu J, Backhaus N, Hürlimann K, Bürgli M, editors. *Geschichte der Landschaft der Schweiz*. Zurich, Switzerland: Orell Füssli Verlag, pp 295–307.
- Lincoln YS, Guba EG.** 1985. *Naturalistic Inquiry*. Newbury Park, CA: Sage.
- Mace GM.** 2014. Whose conservation? *Science* 345(6204):1558–1560. <http://dx.doi.org/10.1126/science.1254704>.
- Madill A, Jordan A, Shirley C.** 2000. Objectivity and reliability in qualitative analysis: Realist, contextualist and radical constructionist epistemologies. *British Journal of Psychology* 91(1):1–20. <http://dx.doi.org/10.1348/000712600161646>.
- Manning CD, Raghavan P, Schütze H.** 2008. *Introduction to Information Retrieval*. Cambridge, United Kingdom: Cambridge University Press.
- Mayer M, Müller M, Woltering M, Arnegger J, Job H.** 2010. The economic impact of tourism in six German national parks. *Landscape and Urban Planning* 97(2):73–82. <http://dx.doi.org/10.1016/j.landurbplan.2010.04.013>.
- Mayring P.** 2010. *Qualitative Inhaltsanalyse. Grundlagen und Techniken*. 11th edition. Weinheim, Germany and Basel, Switzerland: Beltz Verlag.
- Mayring P.** 2014. *Qualitative Content Analysis: Theoretical Foundation, Basic Procedures and Software Solution*. <https://www.ssoar.info/ssoar/handle/document/39517>; accessed on 12 August 2018.
- McAfee K.** 1999. Selling nature to save it? Biodiversity and green developmentalism. *Environment and Planning D: Society and Space* 17:133–154.
- Michel AH.** 2019. How conceptions of equity and justice shape national park negotiations: The case of Parc Adula, Switzerland. *eco.mont* 11(1):25–31. <http://dx.doi.org/10.1553/eco.mont-11-1s25>.
- Michel AH, Backhaus N.** 2019. Unravelling reasons for the non-establishment of protected areas: Justification regimes and principles of worth in a Swiss national park project. *Environmental Values* 28(2):171–190.
- Miles MB, Huberman AM.** 1994. *Qualitative data analysis: An expanded sourcebook*. 2nd edition. Thousand Oaks, CA: Sage.
- Müller-Jentsch D.** 2017. *Strukturwandel im Schweizer Berggebiet*. Zurich, Switzerland: Avenir Suisse.
- O'Sullivan D, Bergmann L, Thatcher JE.** 2018. Spatiality, maps, and mathematics in critical human geography: Toward a repetition with difference. *Professional Geographer* 70(1):129–139. <http://dx.doi.org/10.1080/00330124.2017.1326081>.
- Parc Adula.** n.d. Perimeter: Kernzone und Umgebungszone. <http://parcadula.ch/de/Progetto-Parc-Adula/Perimetro.html>; accessed on 15 August 2018.
- Philip LJ.** 1998. Combining quantitative and qualitative approaches to social research in human geography: An impossible mixture? *Environment and Planning A* 30(2):261–276. <http://dx.doi.org/10.1068/a300261>.
- Pröbstl-Haider U, Pütz M.** 2016. Großschutzgebiete und Tourismus in den Alpen im Zeichen des Klimawandels. *Natur und Landschaft* 91(1): 15–19. <http://dx.doi.org/10.17433/1.2016.50153375.15-19>.
- Pütz M, Gubler L, Willi Y.** 2017. New governance of protected areas: Regional nature parks in Switzerland. *eco.mont* 9(special issue):75–84. <http://dx.doi.org/10.1553/eco.mont-9-sis75>.
- Pütz M, Job H.** 2016. Governance und Regionalentwicklung in Großschutzgebieten der Schweiz und Österreichs. *Raumforschung und Raumordnung* 74(6):569–583. <http://dx.doi.org/10.1007/s13147-016-0451-2>.
- Rajaraman A, Ullman JD.** 2011. *Mining of Massive Datasets*. Cambridge, United Kingdom: Cambridge University Press. <http://dx.doi.org/10.1017/CB09781139058452>.
- Reuber P, Pfaffenbach C.** 2005. *Methoden der empirischen Humangeographie*. Braunschweig, Germany: Westermann.
- Reutz B, Gruber S, Forster S.** 2016. *Managementplan Parc Adula. Kapitel C*. Roveredo, Switzerland: Parc Adula.
- Schenk A, Hunziker M, Kienast F.** 2007. Factors influencing the acceptance of nature conservation measures: A qualitative study in Switzerland. *Journal of Environmental Management* 83:66–79. <http://dx.doi.org/10.1016/j.jenvman.2006.01.010>.
- Schmid H.** 1999. Improvements in part-of-speech tagging with an application to German. In: Armstrong S, Church K, Isabelle P, Manzi S, Tzoukermann E, Yarowsky D, editors. *Natural Language Processing Using Very Large Corpora. Text, Speech and Language Technology*. Dordrecht, Netherlands: Springer, pp 13–25.
- SECO [Staatssekretariat für Wirtschaft].** 2017. *Die Neue Regionalpolitik des Bundes*. https://www.seco.admin.ch/seco/de/home/Publikationen_Dienstleistungen/Publikationen_und_Formulare/Standortforderung/Broschuren/die-neue-regionalpolitik-des-bundes.html; accessed on 10 September 2018.
- Siegrist D, Boesch M, Renner E.** 2009. *Labelregionen. Strategie für eine nachhaltige Regionalentwicklung im Alpenraum. Forschungsbericht NFP 48*. Zurich, Switzerland: vdf Hochschulverlag.
- Stem MJ.** 2008a. Coercion, voluntary compliance and protest: The role of trust and legitimacy in combating local opposition to protected areas. *Environmental Conservation* 35(3):200. <http://dx.doi.org/10.1017/S037689290800502X>.
- Stem MJ.** 2008b. The power of trust: Toward a theory of local opposition to neighboring protected areas. *Society & Natural Resources* 21(10):859–875. <http://dx.doi.org/10.1080/08941920801973763>.
- Stoll-Kleemann S.** 2001. Barriers to nature conservation in Germany: A model explaining opposition to protected areas. *Journal of Environmental Psychology* 21(4):369–385. <http://dx.doi.org/10.1006/jevp.2001.0228>.
- Swiss Confederation.** 2007. Ordinance on Parks of National Importance. <https://www.admin.ch/opc/en/classified-compilation/20071162/index.html>; accessed on 3 September 2018.
- Swiss Confederation.** 2017. *Federal Act on the Protection of Nature and Cultural Heritage*. <https://www.admin.ch/opc/en/classified-compilation/19660144/index.html>; accessed on 5 April 2019.
- Weber F.** 2013. *Naturparke als Manager einer nachhaltigen Regionalentwicklung. Probleme, Potenziale und Lösungsansätze*. Wiesbaden, Germany: Springer VS.
- Wiedemann G.** 2016. *Text Mining for Qualitative Data Analysis in the Social Sciences*. Wiesbaden, Germany: Springer Fachmedien.
- Woltering M.** 2012. *Tourismus und Regionalentwicklung in deutschen Nationalparks. Regionalwirtschaftliche Wirkungsanalyse des Tourismus als Schwerpunkt eines sozioökonomischen Monitoringsystems*. Würzburger Geographische Arbeiten 108. Würzburg, Germany: Universität Würzburg.
- Yilmaz K.** 2013. Comparison of quantitative and qualitative research traditions: epistemological, theoretical, and methodological differences. *European Journal of Education* 48(2):311–325. <http://dx.doi.org/10.1111/ejed.12014>.