



From Conflict to Conviviality? Transforming Human–Bear Relations in Bulgaria

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The question of how to transform human–wildlife relations from conflict to coexistence, rather than merely mitigating conflicts, has become a central focus of research and practice. In this article, we address this important question by exploring the factors that may contribute to promoting successful coexistence between humans and brown bears within Europe and elsewhere. We do this through comparative analysis of two cases in rural Bulgaria evidencing different degrees of conflict and coexistence between members of the two species. Through this comparison, we highlight the main factors that lead to conflict in our problem case as well as those that might help to instead foster coexistence. We situate this analysis within growing discussion of convivial conservation as a novel approach intended to transform conservation policy and practice throughout the world that emphasizes the importance of attending to the overarching social and political-economic processes encompassing human–wildlife interaction in order to influence the latter. In this way, we contribute to research and discussion concerning how to transform human–wildlife conflict (HWC) into convivial coexistence more broadly by demonstrating how attention to the immediate circumstances of human–wildlife encounter in such efforts should be complemented by promotion of more inclusive, democratic forms of decision-making, and egalitarian distribution of economic resources.

Keywords: human–wildlife conflict, coexistence, convivial conservation, brown bear, Bulgaria

INTRODUCTION

Current discussions concerning nature conservation address both the shortcomings of historical attempts to preserve biodiversity and potential ways to redress such issues in pursuit of more successful and just preservation of non-human nature moving forward (e.g., Marris, 2011; Wuerthner et al., 2015; Büscher and Fletcher, 2020). Within such discussions, many agree that we need better relations with non-human nature transcending the strict borders and dichotomies characterizing conventional conservation approaches focused on creation and enforcement of protected areas (PAs). Consequently, the concepts of coexistence, cohabitation, and conviviality are becoming central to research and discussion (Hinchliffe and Whatmore, 2006; Boonman-Berson et al., 2016; Frank and Glikman, 2019; Büscher and Fletcher, 2020). This growing currency is accompanied by calls to replace the “negativity” implied in the term human–wildlife *conflicts* (HWC) with a more positive focus on encouraging coexistence (Frank and Glikman, 2019), as well as to reform the problematic concept of wildlife *management* considered overly instrumental and anthropocentric (Boonman-Berson et al., 2016).

The question of how to transform human–wildlife relations from conflict to coexistence, rather than merely mitigating conflicts, has thus become a central focus of attention (e.g., Frank and Glikman, 2019; Büscher and Fletcher, 2020; Hodgson et al., 2020). A focus on nurturing coexistence is essential in particular to the novel “convivial conservation” approach grounded in the idea that humans and animals can and should live together within shared landscapes (Büscher and Fletcher, 2020), but which goes beyond this narrow focus on the immediate circumstances of human–wildlife interaction to also emphasize the importance of attending to the overarching social and political-economic processes within which such interaction occurs.

Fostering coexistence is considered particularly challenging in the case of large carnivores such as the brown bear (*Ursus arctos*), the focus of the present article. Like other large carnivores, the brown bear is considered a keystone species, attributed with controlling ungulate population density and thus preserving vegetation structure and plant diversity within the ecosystem it inhabits (Van Valkenburgh and Wayne, 2010). It is also particularly sensitive to human influence (Woodroffe and Ginsberg, 1998) which increases its vulnerability to anthropogenic change and extinction through impacts such as habitat loss and degradation, depletion of prey, persecution, hunting, and exploitation (Karanth and Chellam, 2009). In many cases, the overlapping presence of brown bears and humans in multi-use landscapes increases the likelihood of conflict and reduces local human populations’ tolerance of the animals’ presence (Treves and Karanth, 2003; Temple and Terry, 2007).

In this article, we address this important issue by exploring the factors that may contribute to promoting successful coexistence between humans and brown bears within Europe and elsewhere. We do this through comparative analysis of two cases in Bulgaria evidencing different degrees of conflict and coexistence between members of the two species. In previous articles, we focused on a case in Bulgaria’s Rodopi mountains in which people and bears have learned to cohabitate in relative harmony (see Toncheva and Fletcher, 2021; Toncheva et al., in press). As this case is rather exceptional, we complicate our analysis here by introducing a different case in the same region wherein humans and bears face a number of obstacles inhibiting this same sort of peaceful cohabitation. In this article, we focus on developing a detailed description of this second case, while due to space constraints we introduce the first case via reference to our previously analyses published elsewhere (see Toncheva and Fletcher, 2021; Toncheva et al., in press). Through comparison of the two cases, we aim to highlight the main factors that led to conflict in this case as well as those that might help to instead foster coexistence. In this way, we contribute to growing discussions concerning how to transform HWC into coexistence more generally by drawing on the convivial conservation approach to demonstrating how promotion of coexistence in human–wildlife relations can be complemented by promotion of more inclusive, democratic forms of conservation decision-making, and egalitarian distribution of economic resources.

We begin by situating our study within overarching discussions concerning HWC and coexistence. We then move to the specific cases, outlining our methodology emphasizing a

multispecies research approach. Following this, we outline the results of our study, explaining the various factors that seem to have contributed to exacerbating human–bear conflict in this area. We then compare this case with results of our previous research in a different case exhibiting relatively successful coexistence in order to illuminate the characteristics accounting for this difference. We conclude by highlighting the implications of our analysis for the broader discussion regarding how to transform HWC into coexistence in relation to the convivial conservation proposal.

FROM CONFLICT TO COEXISTENCE

Until recently, human–wildlife interactions were predominantly studied by a broad interdisciplinary field in their negative connotation as HWC (see Margulies and Karanth, 2018; Frank and Glikman, 2019). From this perspective, HWC is addressed predominantly in terms of its negative economic and ecological impacts on local communities and wildlife populations (Barua et al., 2013; Margulies and Karanth, 2018). Conflicts are believed to arise especially when activities of humans and wildlife intersect (Treves et al., 2006; Boonman-Berson et al., 2019), leading to unwanted results for both wildlife and local communities who pay the costs for living with wild animals. From the humans’ perspective, this is commonly interpreted as the animals’ exceeding a threshold of social carrying capacity or cultural tolerance (e.g., Carpenter et al., 2000; Brenner and Metcalf, 2020). Particularly in the case of large carnivores, there has historically been widespread belief among both conservationists and policy-makers that such animals cannot coexist with humans (Treves et al., 2006).

A growing body of research demonstrates, however, that coexistence is indeed possible in certain cases, for instance in human–tiger relations in Nepal (Carter et al., 2012) and human–brown bear relations in Bulgaria (Toncheva and Fletcher, 2021; Toncheva et al., in press). Therefore, researchers increasingly assert that “[t]here is a need to consider conflict and coexistence as they relate to each other” (Frank and Glikman, 2019, p. 11). Promotion of coexistence is based on the presumption that humans and animals are able to inhabit a common, or at least overlapping, landscape in relative harmony (Hinchliffe, 2007). According to Frank, “coexistence takes place when the interests of humans and wildlife are both satisfied, or when a compromise is negotiated to allow the existence of both humans and wildlife together” (Frank, 2016, p. 739). There is no agreement, however, regarding how to precisely define the term while there exist diverging understandings which ranges from mere mutual tolerance (Woodroffe et al., 2005), to peaceful cohabitation (Hinchliffe, 2007) to active co-adaptation (Boonman-Berson et al., 2016; Carter and Linnell, 2016), and conflict negotiation (Yurco et al., 2017). To accommodate such diversity, Frank (2016) proposes the idea of a *coexistence continuum* ranging from simple tolerance at one end to active co-creation of shared space at the other.

Whatever one’s preferred definition, the central challenge faced in such discussions is “how to catalyse a paradigm

shift from HWC discourse to human–wildlife interactions and coexistence dialogue for a more positive and inclusive relation with wildlife and nature” (Frank and Glikman, 2019, p. 13). This would then require exploring strategies to “embrace the differences” between species in learning to “live together” in shared landscapes (Boonman-Berson et al., 2016; Büscher and Fletcher, 2020), as well as “how conflicts can be reduced to the point where people start to accept wildlife in their proximity” and in this way “begin to shift toward mechanisms that enhance coexistence and tolerance toward wildlife” (Frank and Glikman, 2019, p. 12).

Our article responds to such calls by exploring different cases of human–bear interaction in Bulgaria’s Rodopi mountains displaying dramatically differing degrees of conflict and coexistence (Toncheva and Fletcher, 2021). In particular, our research contributes to furthering exploring the human dimensions of human–wildlife interaction (see e.g., Manfredo et al., 2009; Dickman et al., 2013) as well as to the study of human–bear conflict and coexistence specifically (Wilder et al., 2007; Howe et al., 2010; Can et al., 2014). As Frank and Glikman (2019) point out, this growing line of inquiry has rendered the picture of HWC “even more complex” than previously by bringing into focus the intricate relationships obtaining among the multiple actors comprising a given situation, the particular power dynamics informing such relationships (Margulies and Karanth, 2018), and the way animals are often ascribed significant symbolism (of power, of oppression, etc.) by local community members that influence human–wildlife interactions beyond simple economic interests. This complexity is compounded by mounting assertions of the need to also account for the animals’ perspectives and interests in such interactions in addition to the various humans’ (Margulies and Karanth, 2018; de Silva and Srinivasan, 2019).

Such assertions bring into focus the challenges that research dealing with human–wildlife interaction faces as a form of multispecies encounter (Hodgetts and Lorimer, 2015; Margulies, 2019). Traditionally, the majority of projects to manage HWC have been “directed or designed by ecologists without social science input” (Treves et al., 2006, p. 392). Yet natural science studies of this sort are critiqued for not acknowledging the importance of social factors that are often major factors in human–wildlife relations (Dickman, 2010; Dickman et al., 2013). Despite recent innovations in the field including increased integration of natural and social science methods, researchers still face a number of challenges related to adequate methodology, expertise, or available data sources to do justice to the social dimensions of human–wildlife interaction in the depth and rigor demanded by social scientists (Madden, 2014; Margulies, 2019).

On the other hand, the anthropocentrism present in much of the social science research concerning conservation has been criticized for failing to adequately include perspectives of the non-humans involved in human–wildlife interactions (Hodgetts and Lorimer, 2015; Srinivasan and Kasturirangan, 2016). To transform conflict into coexistence, critics assert, we must take seriously the role of animals in the “coproduction of entangled environments” (Margulies and Karanth, 2018, p. 155). Ethnographic study of multi-species encounter that

acknowledges the formative role of animals in shaping human–non-human interaction (Haraway, 2008; Margulies, 2019) is therefore appropriate to overcome the limitations of study from the perspective of either social or natural science considered independently, and thus to do justice to complexities of and the diverse actors involved in human–wildlife relations, as we explain further in the following section.

Striking an appropriate balance between human and non-human perspectives and interests in conservation decision-making is particularly relevant to the approach termed “convivial conservation,” in which promotion of human–wildlife coexistence stands central but which is also grounded in a concern to foreground social justice and equity in such decision-making (Büscher and Fletcher, 2019, 2020). In this respect, convivial conservation aims to also balance a focus on the immediate context of conservation programming with attention to the overarching political-economic structures in which such contexts are embedded and that shape the sorts of interventions that can be realized within them.

Pursuit of convivial conservation thus emphasizes the need to restructure conservation around three central principles, both globally and locally: (1) conservation spaces that integrate rather than separate humans and other species; (2) direct democratic governance arrangements that challenge elite technocratic management; and (3) novel finance arrangements that seek not to commodify conserved resources but instead redistribute existing wealth and resources. Pursuit of these three principles in concert can thus ground pursuit of *coexistence* within a broader concern to facilitate human–wildlife *conviviality* by addressing the important social and political factors shaping interaction between humans and other species in many spaces (Pooley et al., 2017).

In this discussion, we therefore employ the convivial conservation proposal as a guiding framework through which to evaluate to what extent our different cases exhibit aspects of conviviality in conservation policy and human–wildlife relations. Through comparison of the two cases, one of which is explored in detail below and the other discussed through reference to previous publications (Toncheva and Fletcher, 2021; Toncheva et al., in press)—and which for readability’s sake are referred to as case #1 and case #2, respectively—from this perspective we ask what lessons can be learned from this comparison in terms of prospects and mechanisms to transform conflicts into convivial relations, both within our cases and more broadly.

STUDY AREA AND METHODS

Empirical research for our focal case (#1) was conducted over 3 months in the fall of 2019 within three rural communities in Bulgaria’s Southern Rodopi mountains, an area right at the border with Greece. While formal ethical review and clearance is not a legal requirement at either institution where the two authors are based, the research was performed in accordance with best practice standards for ethnographers, through adherence to conventional ethical guidelines for ethnographic field research

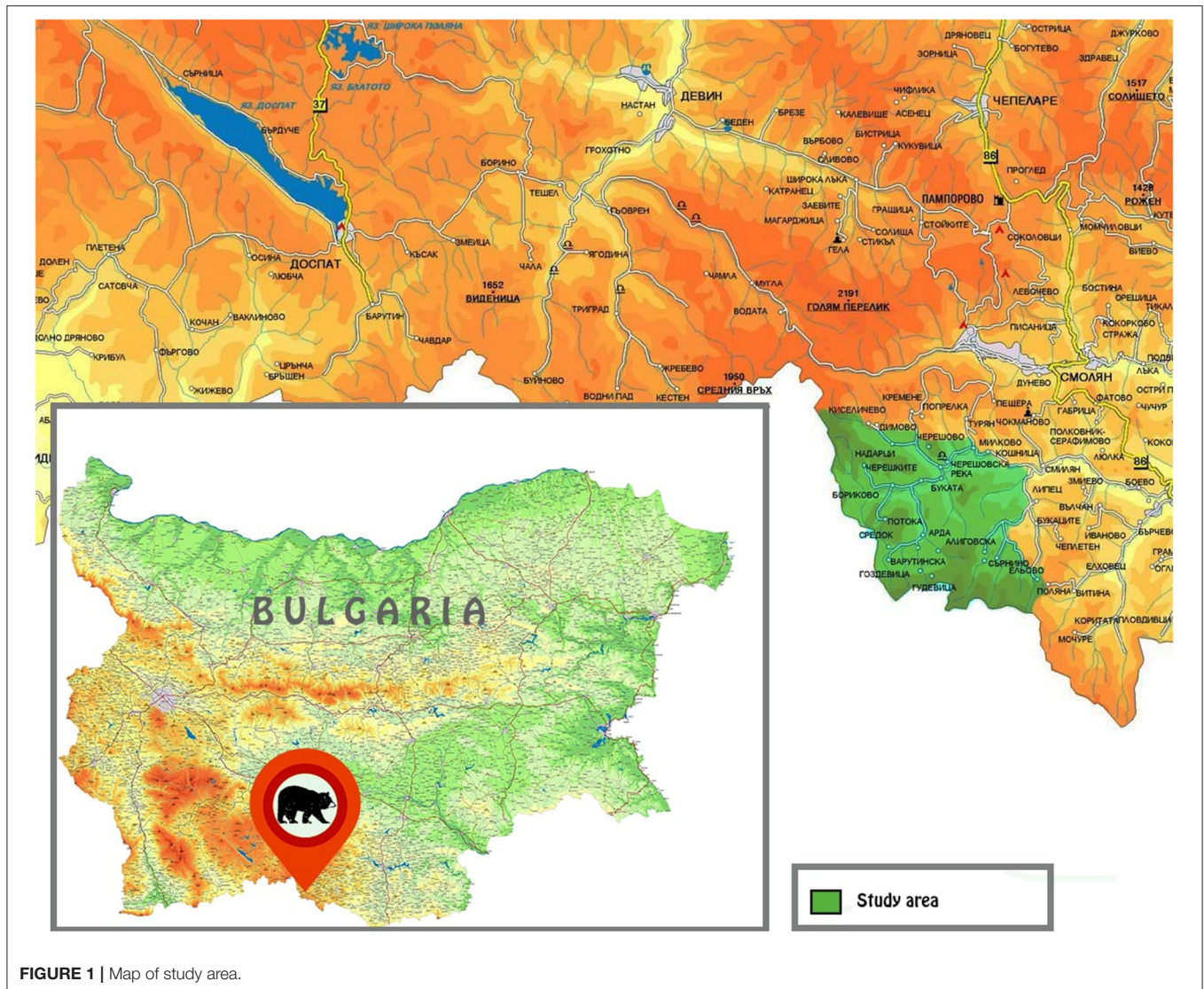


FIGURE 1 | Map of study area.

on interviews with an ecologist who has performed long-term research in the area in order to understand his perspective on bears' behavior. For the purpose of comparative research, we rely on the same ecologist—Julian Perry—as in case #2, as he is the main researcher studying bears in both sites (Yagodina and Arda). Perry is a member of The International Association for Bear Research and Management (IBA) and founder of the non-governmental organization Wild Rodopi, where he works on the Rodopi Bear Project aimed at conservation of the species. In this context, since 2010 he has been conducting a long-term study into the ecology and ethology of brown bears in the Yagodina and Arda regions, and has developed a specific educational tourism programme focused on bear conservation around the village of Yagodina (see Toncheva and Fletcher, 2021). Interview material with Perry presented herein was collected specifically for the current case based on research performed in the case #1 study region only. While research concerning brown bears has also been conducted elsewhere in the country by others (see e.g.,

Gavrilov et al., 2015; Todorov et al., 2020), as our focus is on the behavior of bears in the two study sites specifically we have not included this in our analysis.

In accordance with Latour's notion of "speech prosthesis," for understanding the phenomenology of different perspectives as forms of worldmaking (Latour, 2013), inclusion of Perry's views on bear behavior would "allow non-humans to participate in the discussions of humans, when humans become perplexed about the participation of new entities in collective life" (Kosek, 2010, p. 652, in Madden, 2014, p. 285). Moreover, the ecologist's perspective is based on collection of natural science data concerning brown bears' ecology and behavior via techniques such as use of camera traps, tracking data, and personal observations. Due to the Perry's long term experience, we believe that these data were appropriately collected (following standard ecological study design) and interpreted. Such data reveal general information about the presence, distribution, behavior, and relative abundance of the bears. Camera trapping

and its interpretation, in particular, is able to provide not only additional information on the bear behavior but also to identify the main zones of human–bear cohabitation or specific localities where villagers and bears share a common space and are most likely to come into direct contact and potential conflicts. As this ecologist’s research focused on understanding general patterns of bear behavior, it did not include attention to potential differences between individual animals of the sort that some multispecies researchers emphasize as important (e.g., Haraway, 2008; Ampumuza and Driessen, 2020).

In order to highlight factors in case #1 that appear to inhibit peaceful cohabitation, we refer to a different study previously performed in the village of Yagodina, located in the area of the Yagodina-Trigrad gorges where humans and bears currently live in relative harmony (Toncheva and Fletcher, 2021; Toncheva et al., in press). Investigation of this other case (#2) also entailed ethnographic research, performed between June and September 2018 in and around the village, in the course of which 30 semi-structured and semi-directive interviews were conducted with informants selected via snowball and purposive sampling to include different groups of relevant stakeholders (among permanent residents of the village encompassing diverse age groups): hunters, ecotourism guides, employees in tourism, pensioners, and children, among others (for more methodological details see in particular Toncheva and Fletcher, 2021). Additionally, it entailed administration of a similar questionnaire as in case #2 (and on which this subsequent instrument as well as analysis of data collected with it were in fact modeled) (see Toncheva and Fletcher, 2021).

Taken together, the two cases offer a useful basis for comparison as they hold a number of similarities in relation to characteristics of post-socialist transition, population density, and religious and cultural identity as well as the biodiversity of the surrounding landscape. This allows us to hold these various factors relatively constant in the comparison and instead highlight the key differences informing the differential patterns of conflict and coexistence in the two cases, which we do in the following discussion of our findings. Considering the proximity of the two study areas, separated by only 20 km as the crow flies (although the actual travel distance is much greater given the region’s mountainous topography), there is a possibility that some of the same bears are present in both regions, as the animals are known to range up to 500 km². Given that tracking of individual animals has not yet been performed in either area, however, it is impossible to gauge whether this is the case.

RESULTS

A Landscape of Fear

In previous articles we showed how relations between people and bears in our case #2 can be understood as a *landscape of tolerance* (Toncheva and Fletcher, 2021; Toncheva et al., in press). This depiction is characterized by factors such as non-transgression of the intimate space of both humans and bears and hence active avoidance by both of potential conflict situations, as well as by the ability of both species to “read” and interpret the

signs the others left behind (see Hinchliffe et al., 2005; Boonman-Berson et al., 2016). The site also encompasses what we term a cohabitation space beyond the village within which occasional non-conflictual encounters between members of the two species occur and which has therefore been peacefully inhabited by both humans and bears thus far (see Toncheva and Fletcher, 2021; Toncheva et al., in press). In the following section, by contrast, we outline the main factors that appear to have led, in case #1, to more negative interactions between humans and bears and that inhibit human–bear conviviality.

Human–bear encounter in case #1 is a lived reality for the population, evidenced by the widespread agreement that bears are present in the surrounding landscape. The residents believe, moreover, that there has been an increase in the bears’ population during the last 10 years. In an earlier period (under socialism), bears are believed to have not really been noticed due to their smaller number. An encounter, remembered from the communist times (in 1984), was a case when a bear damaged beehives in the area. The solution to the problem then was lethal control, as the brown bears were not a protected species. The question of the cause of the increased bear population, however, remains unclear for the majority of local residents. A variety of speculative interpretations include suggestions such as that many bears resettled either from a bear reserve area in Rila mountain (Belitsa Dancing Bears’ Park), from a nature reserve across the Greek border, from a hunting farm (Kormisosh, previously a bear breeding reserve) or as a result of their protected status, causing a bear “boom”² in the last years. This uncertainty leads to interpretations going so far as to blame the Regional Inspection of Environment and Water (RIOSV Smolyan) and their Rapid Reaction Team (RRT), due to the image of a bear painted on their jeep:

“There were no bears before. They brought them [the people with the jeep].” (03MOCULTF).

Encountering a bear, therefore, is not unusual for local residents. Encounters are indirect and direct, the former occurring via observations obtained from (the hunters’) video traps, placed in the nearby forests, via narratives of bear encounters as experienced by others, as well as by “reading” (Boonman-Berson et al., 2016) bears’ signs and tracks such as excrement, overturned stones, damaged anthills, etc. These are claimed to be found “all around” the villages and neighboring hamlets, and encountered “every time we exit the village” (11ARDPENF).

Transgression of the intimate village space by the bears is one of the main factors resulting in human–bear conflicts in case #1 (unlike in case #2). Evidence exists of numerous direct encounters (and narratives regarding them), particularly in the village of Mogilitsa, where a bear (or “bears”) with cubs regularly crosses the village borders, resulting in “almost the whole village [having] seen a bear” (01MOMAYM). One of the encounters with the aforementioned bear is considered emblematic, as it

²Here and in the following, all quotations not followed by parenthetical referencing are statements from informants who, for ethical considerations, are presented anonymously.

also appeared on TV news: the descent of the bear to the local kindergarten where around 10 apple trees are present:

“We have one bear which walks around the houses during the season of the apples, also near the kindergarten. . . luckily there were no children there when it descended.” (01MOMAYM).

Bears crossing the village boundaries are encountered “right above the houses,” near the road or by the river when it is descending to drink water. As respondents claim:

“I have seen a bear three times, once it crossed the road, once on the meadow and this week, in front of the house, the cubs were playing. We phoned people not to come around.” (07MOAGRF).

Outside the boundaries of the settlements, bears have been observed on multiple occasions by local hunters near the feeders used for wild game, which attract bears with the provisions of corn, as well as during hunting. People have also seen bears during wood collection, when walking in the forest, and near a local fishery.

The total number of the bears present around the village remains unclear to local residents, who estimate it as between 3 and 10, including a mother with three cubs (some claim there is a mother with 1 or with 2–3 cubs), and increasing every year due to “lack of control over the population” (12ARDMAYM)³. Accounting for outmigration during the last 30 years, many report that nowadays “bears are more than people” (11ARDPENF). The number of bears is considered, consequently, too high for the area around the village and their reduction is seen as a way to improve the situation:

“They need to be reduced. . . when the year is good they give birth to 2–3 cubs. . . when there is a mother with 3 cubs nobody dares to go out of the village.” (12ARDMAYM).

Many respondents (>90%) share the belief, in this respect, that human–bear coexistence is not possible and that the bears “need to be placed in reserves,” or kept “far from the village.” However, for part of the population, the presence of the bears seems not to be a problem *per se*; rather, the real problem is deemed their high number (with 5–6 bears around a settlement considered too high):

“People and bears can cohabit as far as there is a balance; if there is certain number of bears per hectare. . . more becomes dangerous.” (13ARDPENM).

The bears’ perceived omnipresence in this case, as well as the occasional crossing of the village space, has evoked a sense of fear and vulnerability among the local population for individual and group safety, as also exhibited in other cases where humans and carnivores coincide (e.g., Young et al., 2015). This prevents, in some cases, the accomplishment of traditional livelihood activities such as collection of mushroom, herbs and wild

³The number of the bears is most likely inaccurate as they are counted by hunters who claim themselves that bears can be counted by the diverse hunting parties the area, meaning that a bear can be counted by two parties when entering their hunting perimeters.



FIGURE 2 | “Brussels street,” the street “of the bears”.

berries as well as livestock breeding, while not so intensively practiced today:

“Many people are afraid, they don’t enter the forest in order not to meet a bear.” (01MOMAYM); “. . . We are afraid to walk around. We used to go pick up wild strawberries, we don’t go anymore.” (11ARDPENF).

The general state of fear, which dominates human attitudes toward the bears in case #1 (unlike in case #2; see Toncheva and Fletcher, 2021; Toncheva et al., in press) is described by the mayor of one of the examined settlements, whom many residents approach to complain about the situation:

“People are scared, they come to me and I tell them that I am not able to help. . . they prefer that there are no bears around, what use do we have from them, so that people are afraid to go to their agricultural lands.” (01MOMAYM).

Despite the fact that no one from the village has suffered a bear attack while undertaking traditional livelihood activities, a narrative about a person from a neighboring settlement, attacked by a bear while collecting mushrooms, was widely known and seen as a lesson for possible danger.

Many respondents (>70%) felt unable to protect themselves and their families from potential bear encounters or attacks. Bear are, in this sense, considered “really scary” by a large part of the local population (>70%). This perception of insecurity forces the local population to avoid walking out in the dark and to become preoccupied with their children’s safety [some spoke of even avoiding “coming to the village because of the bears” (14MOSALF)]. Many respondents (>60%) claimed that they lived in constant “stress” as the possibility of encountering a bear is real day and night. A notorious street, at the high edge of the village, paradoxically named “Bryusel” (Brussels, Figure 2), is famous for the fact that everybody living there has seen a bear and where nobody comes home after dark.

Despite the fact that vulnerability is not merely imagined, the safety concerns and widespread fear are also enhanced by the villagers’ general attitude and the constant discussions concerning bears, as some acknowledged:

“The fear of the others also determines your fear, while they are in fact not dangerous, they avoid encounters.”; “Every day this is what we discuss...where the bear has been.” (15ARDHUNM).

Another important factor in inciting conflict, discussed in more detail later, is lack of understanding of the bear behavior. The fear reported by a majority of the population is namely a result of the bears’ perceived “unpredictability,” as people claim: “I got scared, as the bear was around 60 m away, I didn’t know how it would react” (15ARDHUNM).

Still, some believe that bears are only dangerous in case the year was “not good” and the animals were unable to find enough food. The bears’ reaction in case of encounter is also described as primarily non-threatening by some respondents: the “bear is curious; it stands up, roars and runs away” (16UPARDHUNM).

With respect to case #2, we demonstrated how closer experience with bears results in better understanding of the bears’ behavior (see Toncheva and Fletcher, 2021; Toncheva et al., in press). This is particularly true for the group of hunters, who have taken the role, in some cases, of de facto “managers” of human–bear relations (see Toncheva and Fletcher, 2021; Toncheva et al., in press). Thus, hunters define bears as “dangerous” only in “particular” situations—if wounded, surprised or if it is a mother bear with cubs. Their encounters, however, can be particularly dangerous due to the practices within specific hunting zones. The only bear attack on a human recorded during the research, occurred during hunting:

“In 2008 our colleague (a hunter) was attacked by bear. It was only 4 m away so he shot it. Later during autopsy they found out that the bear has been shot before, this is obviously why it reacted in this way... so you never know what bear you could encounter” (01MOMAYM).

The government proposed means for protection of the local population, such as the use of bear-protective spray, are not considered particularly efficient due to the fact that one needs to be really close to the bear and requires, moreover, one’s own investments. This is also the case with the measures undertaken by the forestry agents, such as expulsion of a problematic bear, because in most cases the bear returns or becomes aggressive, which only enhances the existing problems. Consequently, locally invented techniques for protection from bears have been developed, such as playing loud music, walking with a torch, using firecrackers, making loud noise, smoking, placing lights around beehives/gardens, and so forth.

Knowing Bears, Knowing Humans

We have previously demonstrated for case #2 the importance of local ecological knowledge (LEK)⁴ for facilitating human–bear cohabitation and how, in particular, bears occupy a significant place within local people’s lifeworlds (see Toncheva and Fletcher, 2021; Toncheva et al., in press). General knowledge of bears, shared by the inhabitants who can read the bears’ signs and

understand the animals as permanent inhabitants, are beneficial for interactions within the shared space (see also Hinchliffe et al., 2005; Boonman-Berson et al., 2016). A similar function is played by particular elements of LEK comprising traditional folklore, which also promote positive images of the bears as symbols of fertility and power (Toncheva and Fletcher, 2021; Toncheva et al., in press).

From the perspective of multispecies research, we have also demonstrated how humans and bears are able, in case #2, to pursue knowledge of one another and act on this knowledge so as to actively minimize potential for conflict (Toncheva and Fletcher, 2021). Despite the fact that some knowledge regarding brown bears is present in case #1, this often appears incomplete or incorrect in comparison to the results of scientific research conducted in the area. In the following, we therefore explore the role of local knowledge (or lack thereof) in fueling human–bear conflict, taking into account the perspectives of both humans and bears (to the extent this can be known via ecologists’ research).

As already mentioned, the number of the bears in the region of Arda remains unclear to the local population. This is not surprising given that even the local conservation agencies claim that bear numbers cannot be accurately assessed due to bears’ distant wanders, during which they are counted by diverse hunting parties in different areas. Bears are generally described by the population as active throughout the whole day (according to some particularly at night), less precisely than experts who define bears’ active period as between 19:00 and 07:00 and the period of inactivity as between 10:00 and 13:00. Relying on observations, respondents believe that bears give birth to 2–3 cubs, remaining with the mother for 2 years, corresponding to the results of an ecological study in the area. Less clear to local people is the nature of bears’ territories, the exact size of which is unknown. Perry’s ecological research does demonstrate, however, that bears have home ranges of varying sizes depending on season and availability of food, dens, and mates, which are not strictly speaking territories as bears do not actively defend these areas from one another.

The issue of feeding is more widely discussed, as it is directly related to the damage caused by bears. Hence, bears are described as feeding on forest berries (bilberries, raspberries, strawberries), fruits (plums, apples), grass, maize (put out by the hunters), honey, and indeed everything— “if they are *struvnitsi*⁵ they can eat even wild boar” (06MOAGRM). Insufficient food supplies in the nearby forests are, according to some of the respondents, the main reason for bears crossing the settlements borders and the hence the damage bears inflict.

According to Perry, bears are able to find seasonal food in the nearby forests, such as green vegetation (grasses, flowering plants) in early spring, nests of small rodents, fruits (strawberries, raspberries, rosehips, plums, apples, pears, Cornelian cherries, bilberries), and nests of ants and wasps in summer. Finally, in autumn, they feed on beechmast,⁶ while throughout the year, they supplement their food supplies with maize that the hunters put out for wild boar. However, no evidence of bears killing wild

⁴We use the term “local” as it is arguable whether knowledge in the examined area can be considered traditional in the sense of evidencing historical continuity (see Toncheva and Fletcher, 2021).

⁵Omnivorous bears.

⁶The fruit of the beech tree.

boar has been observed in the study area, which is explained as this being too difficult and dangerous for the bears, as well as a waste of energy.

In sum, Perry's ecological research supports many residents' conclusion that "in normal years, there should be enough natural food for the bears in the surrounding mountains, and the bears will mostly choose to eat this wild food," undermining this concern as a major factor in bears crossing the settlements' borders.

Another, possibly more important explanation for the already famous bear(s) with cubs entering the villages, is that the female bear is avoiding a male which would possibly attack and kill the cubs. Indeed, Perry claims in support of this that:

"Females and cubs quite often can be found close to villages during the day time (especially in spring and early summer when the cubs are still very young) as it's a 'safe' place for them to keep away from male bears."

The same is true for newly independent subadult bears, who also often wander around during the day and come close to villages, normally just passing through and using specific times of day and habitats to avoid meeting adult male bears (Berger, 2007; Steyaert et al., 2016). Therefore, young bears or mothers with cubs near the villages will "almost certainly be only temporarily there and will not become a permanent nuisance." This is an important fact that remains unknown to the local population, preventing a more precise understanding of the bears' behavior.

In local knowledge, not all bears are believed to hibernate in winter (predominantly the mothers about to give birth) and this occurs only in case there is enough snow, temperatures have dropped, and bears have been able to provide enough food supply. Some hunters, the group with the most knowledge regarding bears, are able to provide more details regarding bear dens and hibernation areas. Such beliefs, for instance, claiming that not all bears hibernate, while contradicted by ecological data, do seem to be supported by changes in weather conditions in winter produced by global warming, resulting in winters in the Rodopi mountains becoming milder and bears' activity levels consequently varying from winter to winter. Therefore, it is no longer unusual for the bears to temporarily emerge in warmer weather and search for food in the vicinity of their dens.

Of particular importance for human–bear coexistence is knowledge regarding bear behavior in case of encounter with humans. There is common disagreement regarding this behavior, with some respondents claiming that a "bear has no fear of humans" (17ARDHUNM) and would not run away if it encounters one, while others believe that a bear senses the smell and sound of humans and attempts to avoid them. In support of our description of the general situation as a *landscape of fear*, there is overall agreement that bears are dangerous. Deeper knowledge held by particular groups (hunters and foresters), however, maintains that bears are considered dangerous depending on the situation.

Ecological knowledge, on the other hand, suggests that bears are typically very timid and usually try to quickly and silently retreat to shelter if they sense humans' presence. An exception to

this rule is that younger subadult bears, according to Perry, may be occasionally inquisitive, and stand up to observe the human, as "they may never have seen a human before and so be uncertain what the strange-looking 'bear' standing on two feet is!" If the human reacts calmly and talks quietly, the bear will then move away. Although all bears are potentially dangerous because of their strength, claws and teeth, the bears in the Rodopi mountains are described by Perry as not generally aggressive. The worst thing to do, according to him:

"Is for locals to try and scare and frighten the bears, as this will only teach bears that humans are aggressive, and then if a bear meets a human it will then think it has to fight to protect itself⁷."

Mutual learning is, therefore, an essential foundation for successful coexistence, according to Perry:

"If bears learn that humans are not a threat and leave them alone, then the bears will ignore and avoid humans and get on with their lives, the same way as bears try to avoid and ignore other bears."

Some elements of local knowledge could be beneficial for bear conservation. For instance, bears are considered intelligent animals by a number of respondents. An interesting belief regarding bears was also recorded in one of the settlements during the research:

"We have this belief that if you shoot a bear, you will die. This happened to a hunter, he shot a bear in 2009 and died 1 year later" (17ARDHUNM).

The population of Rodopi mountains is, interestingly, described by conservation agents as the most tolerant of the bears' presence despite the current conflict situation:

"In Pirin [mountain]⁸, for instance, people stand no bears, here people can murmur but have a conscience, a heart... they cause troubles but forget in 2 days." (20SMCONM).

The involvement of conservation agencies in bears' management makes their representatives' knowledge relevant for the present study. The research demonstrates, in this respect, that what is known by conservation experts is not sufficient and based on solid research. For instance, from their perspective the behavior of the bears has very likely undergone changes since receiving protected status. This is mainly considered a result of the more "frequent encounters with humans" (20SMCONM) and provisioning of food for the wild game, leading to adaptation of the bears to seeing humans rather as "friends" (20SMCONM).

Perry's research, however, only partially supports such views. Some transformations, particularly in the border regime at the end of communism, have enabled bears to move more naturally in the border regions "and establish their cross-border home ranges more effectively." Along with the depopulation of the area

⁷See more on bear behavior and awareness of humans in Toncheva and Fletcher (2021).

⁸A mountain range in Southwest Bulgaria with smaller bear population.

and the abandonment of pastures and orchards, the likelihood of bears “to come and search for fruits and ants undisturbed in these newly liberated habitats” is therefore higher. However, there is no ecological evidence to support the assumption that bears become reliant on the food provisioned by the hunters, instead “still continuing to prefer and choose their natural seasonal foods.” The human scent on and around the feeding site also “does not make them seek out humans to find food,” as bears are aware where more nutritious food can be found. Perry claims:

“In general, I don’t believe there has been any negative change in the behavior of bears during the last 10–20 years. There has been a change in the behavior of humans! It is human behavior in the region that needs to be ‘managed’ and adapted so that humans don’t interfere and disturb the “natural” behavior of the bears. If humans are more understanding of what the bears need and how they live and behave, then it is perfectly possible for humans and bears to live ‘convivially’ in the Rodopi!”

This lack of detailed knowledge on the part of responsible agencies seems to be result of the non-establishment of specialized group to deal with bear issues. The tasks of the existing RRTs (discussed further below) remain limited to solving problems related to damage and compensation, while management of bears such as expulsion and lethal control is divided among different actors and institutions⁹. Consequently, conservation experts admit that “more work” (20SMCONM) and state support is needed for the successful conservation of the brown bear and prevention of bear poaching which seems to exist in the region: “we had found corpses of bears, buried... every 2–3 years” (20SMCONM).

A Conflict Economy

We have previously explained how the lack of economic losses caused by brown bears as well as their inclusion in sustainable ecotourism activities have become significant factors in facilitating peaceful human–bear coexistence in case #2 (see Toncheva and Fletcher, 2021; Toncheva et al., in press). Here, we demonstrate how, in case #1, human–bear conflict is exacerbated by economic loss due to bears, and the insufficient state response to this, as well as a lack of alternative economic avenues (such as tourism) directly linked to the bears’ presence.

The economic damage caused by the brown bears in the research area is an important factor for their negative image among the local population. Damage caused by bears refers predominantly to livestock (sheep, calves), beehives, crops (trees and berries), equipment (barrels, cameras), and fodder for wild game. These occur occasionally, with one of the most serious attacks on livestock including damage to 8 sheep in the village of Arda. The affected owners related the following:

“Four years ago (i.e. 2014) a bear attacked the sheep, we had 14 sheep and one evening they didn’t come back...I went up in the forest to look for them. About 400 m. away I found one

⁹Between the Ministry of Environment and Water and their subdivisions—Regional Inspections, the Ministry of Agriculture, Food, and Forestry as well as the regional Forestry units.



FIGURE 3 | Bears feeding on the corn at the game feeders.

near the fence...and wool around the fence as well as bear’s hairs. One came back, badly bitten by the bear, the next day we found one more...I called RIOSV, they came and concluded it was a bear...we found more sheep bitten by it...one was eaten.” (21ARDPENF).

One of the most affected groups, as well as the one that “perceives the damage most seriously” (20SMCONM), due to the specifics of the practice, are the beekeepers. As one of the affected respondents claims of a bear:

“It damaged three of my beehives...I want no money, I have them for the honey. I have six sheep but keep them closed because of the bears. Otherwise what sense does it make to live in a village?” (04MOHUNM).

Damage is also caused to agricultural objects, trees (mainly bearing apples), berries, and other crops. Bears consuming the corn provisioned by the hunting parties for the game (Figure 3), and damaging the feeders and cameras while chasing the wild game away, result in conflicts with the hunters in the area. The corn consumed by the bears is estimated as high as 80% of the total amount left by the hunters, who express their dissatisfaction as per the following: “we pay to go hunting, bears eat the corn...in the end what do we pay for.” (01MOMAYM).

The loss is further enhanced by the aforementioned precarious economic situation and underdevelopment of the region, producing a lack of alternative livelihood strategies apart from tourism. We have demonstrated elsewhere how a local initiative developed as a solution to this issue has been beneficial in a different area of the Rodopi mountains wherein inclusion of bears in a specific form of ecotourism has thus far supported the animals’ conservation and establishment of a rather positive image among local groups, particularly hunters who benefit most from bear-related tourism (Toncheva and Fletcher, 2021; Toncheva et al., in press). The lack of similar initiatives in this case shows how the conflict is instead exacerbated between bears and hunters who receive no state compensation for their loss (more on this below).

Considering the importance of tourism for maintaining the villages, a number of respondents (>20%) see potential benefit from similar projects focused specifically on bears, encouraged by tourists' expressed interest in photographing the animals, but feel that they lack financial resources or knowledge of the legal regulations regarding this type of ecotourism¹⁰:

"Tourism could work. I know of no place with more bears than here in Bulgaria. They are waiting for the jeeps at the feeders." (28MOPOLM).

As a result, in this case the bears seem to play an ambiguous role in tourism at present, rather than being included as actors in the ecotourism process (as in case #2). Their role is evaluated as both positive and negative, ranging from a source of fear to interest (as shown above) for the tourists. As one informant related:

"One lady, a tourist, was walking around and heard roaring, she ran down to the road and a car stopped. The people told her not to be worried because the bear is not hungry right now and she came back to the village highly outraged." (25ARDTOURM).

"Tourists come but they don't walk in the forests...we have trails but don't maintain them because of the bears." (12ARDMAYM).

The importance of economic loss in conditioning attitudes toward bears is reinforced by the perspectives of some respondents who suffered no damage by bears and therefore "have nothing against them" (10MOPENF). In particular, the relatively more "peaceful" human-bear coexistence experienced by one of the settlements (Gorna Arda) results in beliefs that bears descend to the villages only in particular situations, such as in case of hunger. The reason for lack of damage in this particular village is considered to be the abundance of food supplies in the surrounding forests (such as cornelian cherries, apples, etc.)¹¹.

However, due to the prevailing economic situation in the region, the majority of respondents prefer not to have bears in the area in order to be able to roam freely in the nearby forests and "make some money" (07MOAGRF): "we want no reserves but normal life for the people" (18ARDPENF).

In relation to the damage and economic loss caused by bears, and in the absence of locally developed initiatives to redress this, an important role in case #1 is played by state-directed mitigation measures such as compensation schemes and removal or lethal control of problematic bears. In accordance with EU regulations, damage from brown bear can be claimed and compensated. According to responsible agencies, the compensation procedure is "elaborated at present" (20SMCONM) and adapted to existing gaps in the Bulgarian legislation. Any case of damage is, in

this respect, inspected by a specialized group—the RRT—in cooperation with the local Forestry units. If reported on time and supported by evidence, the damage is documented "within an hour" (20SMCONM). In support of bear conservation, local conservation agencies aim to not only simplify the procedure, but also compensate a wider range of damages than foreseen by the legislation range. This is a result of ambiguities in the existing legislation that appears vague and hence allows for adaptation "to the current situation" (20SMCONM). As conservation expert claims:

"In practice, there is no regulated procedure so far demonstrating how it should happen, it's adapted according to the law for game...which means that damages should be paid via establishing a court case...so we have worked out this mechanism, so far it's working...it's now being unified, that's why we have no requirement that the livestock is registered, for preventive measures...in most cases damages from game animals are not paid but we pay" (20SMCONM).

However, from the perspective of the local population, two main issues appear to prevent such measures contributing to peaceful human-bear coexistence. These are, first, dissatisfaction with (and often lack of understanding of) the procedure and, second, the perceived inadequacy of the value assigned to the loss. Respondents who suffered bear damage report that they needed to undertake long travel in order to receive the compensation or replace their loss, due to the villages' remote location. Moreover, compensation is received via bank transfers, which is problematic for the elderly population in particular (as many lack bank accounts) as well as others given the absence of banks or ATMs in the villages. As one affected actor claimed:

"What can you claim...it is so complex that in the end you will pay more and it's unknown what you would receive. Just one trip to Smolyan is at least 30 leva, what about the other work." (01MOMAYM).

Also illustrative is the story of the family who suffered the loss of eight sheep and who had to travel approximately 85 km away through the mountains to a town in order to receive their compensation. The received amount seemed also not sufficient to replace the loss. Compounding such issues is a common conviction that the procedure of proving that damage was done by a bear is too complex and relies on the established "system of relations," hence being beneficial only for those who "personally know the inspectors at RIOSV" (09MOPENM). Others lament the lack of adequate information regarding the procedure itself.

As previously mentioned, the group of the hunters, one of the main stakeholders in human-bear relations, receive no compensation, neither for the loss of corn eaten by the bears (and estimated as hundreds of kilograms per year) nor for loss of equipment:

"There is a bear at every feeder, it eats everything and when the boar comes it finds nothing...then it leaves the area... what do we pay for...not to go hunting but to feed the bears." (01MOMAYM).

¹⁰At the end of the research, however, we encountered a potential local initiative—an attempt to establish a bear observation place and a guest house which would accommodate the potential tourists. As it was an individual attempt it remains unclear to what extent it would influence wider human-bear relations in the area in the future.

¹¹In this relation we have to acknowledge some initiatives such as planting fruit trees, aiming to provision food for the bears. However, as the results of this initiative will not be evident in the near future it does not currently contribute to the conflict mitigation.

Regarding the monetary value assigned to damaged property, respondents agree that its level, corresponding to the average prevailing market prices, does not account for other costs, as well as emotional and other values assigned to the assets:

“We are not happy with the compensations. You rely on the calf, the bees, you care about them... then you need to start from the beginning again.” (06MOAGRM).

“If they give you 1,000 lev then what, you won't have honey next year.” (02MOCARM).

Meanwhile, standard protective measures, such as electric fences, are not widely used as their distribution by state institutions some years ago was not sufficient to cover everyone's needs. The bears in the area seem, moreover, to be adapting and finding means to avoid the fences, calling into question their basic functionality.

Given all of this, the state conservation policy is considered incapable of embracing the complexity of human–bear relations. Legislation is perceived as anti-human and solely benefiting bears, while the responsible authorities are particularly blamed:

“Laws are insufficient. Only benefit the bears. Nowadays it's better to be a bear in Bulgaria.” (11ARDPENF).

“Authorities take no measures, they [the bears] will eat us, this is the situation... they are more important than the humans.” (13ARDPENM).

Lack of trust in state agents has forced the population to instead rely on local authorities, who, however, seem to lack the power to deal with the conflict situation. A local mayor claims in this respect:

“In order to take some precautions the bear has to cause problems three times... but what if it encounters a child at night? The animal is afraid, it's normal, what if they meet at a narrow place? The bear is then protected and the human will suffer. Bears are more protected than people... if something happened institutions would come from I don't know where.” (01MOMAYM).

Local authorities are, moreover, excluded from decision-making regarding the bears, in addition to not being provided with information concerning bear issues such as research and population monitoring:

“I don't know whether they count them... they never inform us, who goes where or what they do.” (01MOMAYM).

The same is true, to a large extent, for the local population, as evidenced in statements like the following:

“Ecologists come to count them [bears], but only if there is a problem, then go away. No one cares about us.” (07MOAGRF).

Loss of faith in the capacity of the responsible institutions to find solutions to the problems experienced by the local population has possibly led to methods of “manage[ing] the bears' number themselves” (17ARDHUNM) (i.e. killing them), questioning to a high extent the success of the bear conservation in the area.

DISCUSSION

This study has demonstrated how various factors prevent humans and bears, in case #1, from establishing successful cohabitation strategies and adapting to living together in a shared landscape. Unlike in case #2, where the lack of concrete management strategies imposed from outside has led to the establishment of bottom-up mechanisms of mutual adaptation and coexistence to create a landscape of tolerance (see Toncheva and Fletcher, 2021; Toncheva et al., in press), humans and bears in case #1 have largely failed to do so, instead living in a shared *landscape of fear*.

A main factor contributing to this reality is the regular transgression of the intimate village space by the bears, accompanied by a common misinterpretation of this behavior by the local population. Direct and indirect encounters are thus marked by the perceived “unpredictability” of the bear behavior and anxiety on the part of humans. The constant feelings of “stress” and “fear” experienced by local residents and resulting diminishment of forest activities contribute to inhibit establishment of better mechanisms informing proper behavior in case of encounter. Unlike in case #2, where “both actors can be understood to “read” each other's signs” (see Toncheva and Fletcher, 2021; Toncheva et al., in press) and incorporate this into practices of respect and avoidance, thereby increasing mutual awareness and predictability, this happens to a much lesser extent in case #1, wherein people put far less effort into studying and understanding bear behavior. The bear here has become, on the contrary, a symbol of threat to personal safety and an obstacle for development for the local population. Such negative attitudes in turn reinforce bears' apparent perception of people as aggressive antagonists and competitors for space and resources.

Previously, we have also shown how rather peaceful coexistence grants bears a significant place in local people's lifeworlds in case #2, exemplified by bears' appearance as characters in jokes and poems (Toncheva and Fletcher, 2021; Toncheva et al., in press). Moreover, elements of LEK comprising traditional folklore promote positive images of bears as symbols of fertility and power, enhanced by the performance of stress releasing rituals in case of bear encounter that contribute to mitigating potentially negative effects of such an encounter (Toncheva and Fletcher, 2021; Toncheva et al., in press). In case #1, by contrast, while some LEK regarding bears exists, it is often relatively incomplete or inaccurate in comparison with scientific knowledge, thus inhibiting rather than facilitating coexistence. An exception (in terms of efficacy not accuracy), in relation to folklore, is the single encountered fragment of traditional belief that killing a bear would provoke reciprocal consequences for the human.

In particular, bear behavior has often been misinterpreted as dangerous even when it is likely not. In some cases, this is even acknowledged by local actors, particularly in their explanations of the factors influencing aggressive bear behavior. LEK in relation to bears' ecology also remains fragmented in case #2, ranging from possession of facts corresponding with current scientific knowledge to overestimation of various dynamics to simple vagueness and uncertainty (Toncheva and Fletcher, 2021;

Toncheva et al., in press). There we have shown that lack of practical experience with bears results in more fragmented and superficial knowledge (Toncheva and Fletcher, 2021; Toncheva et al., in press), and this appears to be true in case #1 as well, heightening fear of bears among those who know of bears only through brief encounter or through narratives related by others.

Further, including bears as actors in the “multispecies network” has shown how their behavior is often misinterpreted, as well as their curiosity when “trying to know the humans,” which is instead seen as a sign of aggression by many people. This is valid even for conservation experts who fail to acknowledge the needs of the animals or lack relevant data for establishing a better picture of their habits and behavior. Therefore, rather than the co-production of knowledge and mechanisms for cohabitation evident in case #2 (Toncheva and Fletcher, 2021), here bears are still attributed with negative characteristics such as being “problematic,” while humans remain largely unable to look through the “eyes of the bears” and thus grant them relevant space within the network of multispecies relations.

We have previously outlined the role of the hunters as “bear managers” in case #2, largely due to the origin of their LEK in direct experience and observations of the bears in relation to their participation in ecotourism delivery (Toncheva and Fletcher, 2021; Toncheva et al., in press). In case #1, by contrast, hunters do not generally play a similar role despite possessing deeper knowledge of bears. While in case #2 hunters also act as experts when applying adaptation measures, as well as transmitting information and guidance to other segments of the local population (Toncheva and Fletcher, 2021), in case #1 they are instead one of the groups most negatively impacted by bears, suffering damage at their feeders and game being chased away by the animals.

Regarding the economic dimension of human–bear coexistence, in case #2 we have previously demonstrated how locally developed ecotourism focused on bears functions as an economic incentive, albeit a relatively modest one, for local people to tolerate bears’ presence (Toncheva and Fletcher, 2021; Toncheva et al., in press). This initiative’s success is due to a few factors: its maintenance in low levels which limits ecological impacts; self-mobilization by local people who thus remain managers of their own resources and influential actors in tourism design and delivery; and its relatively low profits and non-reliance on market expansion (Büscher and Fletcher, 2020), thereby prevent conflicts but benefiting local hunters as those most affected by the bears’ presence (Toncheva and Fletcher, 2021; Toncheva et al., in press). In case #1, on the other hand, we have demonstrated how a combination of factors, such as the underdevelopment of the region, the ambiguous position of bears in tourism, and the reliance on conventional compensatory mechanisms, fails to mitigate the effects of negative human–bear interaction.

CONCLUSION

Through comparison analysis of the relative incidence of human–bear conflict and coexistence in our two contrasting case studies, the preceding discussion has highlighted a variety of characteristics that help to account for this discrepancy. In

so doing, the analysis also highlights ways that such factors resonate with elements of the convivial conservation proposal previously outlined.

First, our analysis supports this proposal’s assertion of the need for “more sensitivity in terms how non-humans are studied and managed” (Büscher and Fletcher, 2020, p. 195) in developing integrated conservation spaces that humans and wildlife cohabit. It also supports the proposal’s emphasis on the need to encourage mutual tolerance and adaptation within such spaces.

Notwithstanding the various problematic issues noted in the preceding discussion, case #1 is also marked by a certain level of tolerance toward bears, expressed not only by conservation experts but by some local residents too. Further encouragement of such tolerance, for example through dissemination of guidelines for negotiating human–bear encounters based on efforts to understand the bears’ perspective in such encounters of the sort that are present in case #2, could provide a good basis for conflict mitigation and a bridge toward mutual adaptation and conviviality.

Our comparative analysis also supports convivial conservation’s assertion of the need for greater democratization in conservation governance (Büscher and Fletcher, 2020). As our analysis demonstrates, case #1 is characterized by a distinct lack of democratic participation by local communities in policymaking regarding brown bears, which therefore appears to deal rather superficially and inadequately with the problems apparent in human–bear interaction. This is in marked contrast to case #2 of relatively successful cohabitation characterized by fairly democratic decision-making by local residents unimpeded by state-level authorities (Toncheva and Fletcher, 2021; Toncheva et al., in press). Despite the fact that the importance of genuine democratic participation in enabling community-based conservation has been reemphasized many times, research has shown that this often remains a rhetorical commitment with no real granting of rights (Dressler et al., 2010). A lack of genuine commitment to democratic participation appears problematic in our conflict case, as evidenced by widespread feelings of despair and lack of trust in state authorities and conservation agencies. A shift from HWC to conviviality in this case would, therefore, likely be facilitated by greater democratic engagement achieved via inclusion of local authorities and community members in discussion and decision-making.

Finally, our two cases are also differentiated by the extent to which they evidence finance mechanisms directly linked to conservation strategies that do not promote overdependence on market engagement—another core principle of convivial conservation (Büscher and Fletcher, 2020). In case #2, bear tourism has become an important (if limited) source of funding from and for bear conservation contributing to relatively peaceful coexistence (Toncheva and Fletcher, 2021; Toncheva et al., in press), which, while indeed harnessing markets for conservation finance, is small-scale enough to be part of a diversified income stream and hence does not encourage excessive market dependency. Case #1, by contrast, exhibits no similar mechanism. On the contrary, in this latter case the existing financial mechanism intended to support bear conservation—the damage compensation scheme—seems to be achieving the opposite due to operational deficiencies.

Development of responsible tourism emphasizing “engaged visitation” rather than spectacular voyeurism (Büscher and Fletcher, 2020), and which includes the bears as respected actors, could thus likely facilitate convivial coexistence in case #1 as well. Possibly even more effective would be to implement something like a “conservation basic income (CBI),” which Fletcher and Büscher (2020) propose as a truly non-market mechanism similar to a “basic income grant” (see Ferguson, 2015). Such a basic income could serve as an alternative livelihood for local residents to compensate for economic impacts of living with bears unencumbered by bureaucratic requirements or delays in distribution of benefits.

Our analysis, in sum, has demonstrated the utility of cross-case comparison in helping to elucidate the factors contributing to human–wildlife coexistence. It has also shown that the principles of convivial conservation can function as an appropriate framework both for assessing these factors and for promoting coexistence more broadly. We therefore invite other researchers to follow a similar analytical approach in working to further understand and develop conditions for convivial coexistence.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author/s.

ETHICS STATEMENT

Ethical review and approval was not required for this study with human participants, in accordance with the local legislation and institutional requirements.

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AUTHOR CONTRIBUTIONS

ST designed the study, conducted fieldwork research, transcribed the interviews, and wrote first draft of the paper. RF contributed to conceptual framework of the study and wrote sections of the manuscript. All authors contributed to manuscript revision, read, and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fcosc.2021.682835/full#supplementary-material>

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