

1 **A Teleological Approach to the Wicked Problem of Managing Utría National Park**

2 Nicolás Acosta García, Katharine N. Farrell, Hannu I. Heikkinen, Simo Sarkki

3 **ABSTRACT**

4 Utría National Park is a remote biodiversity hotspot in Colombia. It encompasses ancestral
5 territories of the Embera indigenous peoples and borders territories of Afro-descendant
6 communities in El Valle. We explore environmental value conflicts regarding the use of the
7 park as a Wicked Problem that has no clear solution. Juxtaposing how the territory is
8 perceived by different communities, we employ Faber et al.'s heuristic of the three tele of
9 living nature to search for deficiency in the third telos, service, which we take to be
10 symptomatic of Wicked Problems. Based on field data encoded using the three-tele heuristic,
11 concerning how the respective communities would like to use the park area, we find
12 deficiencies in the third telos and develop recommendations regarding how these might be
13 addressed.

14 **Key Words:** Wicked Problems, Utría National Park, Colombia, Teleology, Value Conflicts,
15 Indigenous peoples, Afro-descendant communities, Protected Areas

16 **1 INTRODUCTION**

17 Ecotourism in tropical biodiversity hotspots, where massive species extinctions are expected
18 if there is no effective protection (Myers et al. 2000; Bruner et al. 2001), is seen as a way to
19 reconcile conservation with development by turning it into a profitable service (Orams 1995).
20 With this logic in mind, Colombia is actively promoting tourism to its exceptional wealth of
21 internationally relevant protected areas. These cover nearly 17 million hectares, roughly 15%
22 of the country's total area, and span all five of its diverse bioregions. The study presented here
23 explores contemporary challenges and opportunities associated with the management of one

1 of these areas, Utría National Park, which is located along the northwest Pacific coast of
2 Colombia, and is promoted as a prime ecotourism destination (DNP 2007, 2008).

3 Despite Utría being currently a relatively peaceful place, it is no stranger to conflict. On at
4 least two occasions in the past twenty years the local Afro-descendant and Embera
5 communities have taken control of parts of the park to support demands for better public
6 services. The area has seen a number of incidents related to Colombia's armed conflict,
7 including kidnappings, forced displacements and the presence of both military state and
8 armed non-state actors. There is also a weak link to the international drug trade and soft forms
9 of resistance, such as non-compliance with park rules, are ongoing. Like many similar areas
10 throughout Colombia, Utría is inhabited by communities whose environmental values are not
11 necessarily compatible with those of either ecotourism or conservation. On that basis, it can
12 be expected that existing conflicts, in and around Utría, may worsen if ecotourism projects are
13 pursued without sufficient attention to the interests and needs of local actors. Since it is
14 almost inevitable that such projects will proceed, a key question becomes, how might they be
15 pursued without exacerbating conflict.

16 We address that question here by conceptualising contemporary management of Utría
17 National Park as a Wicked Problem (Rittel & Weber 1973), viewed from a teleological
18 perspective (Faber et al. 1995, 1996). This provides us with a conceptual basis for exploring
19 how the different self-understandings of environmental place (Farrell & Thiel 2013) of three
20 key stakeholder communities – the local Afro-descendant community, the local Embera
21 indigenous community and the National Park Administration – can be considered together
22 and compared with one and other. Our objective is to explore how environmental value
23 conflicts between these communities might be avoided, or, where present, constructively
24 resolved. We do this by drawing attention away from conflict and onto the ways in which the

1 studied communities are related to each other through their shared use of Utría's territories
2 and resources.

3 In order to achieve this shift in focus, we employ a teleological heuristic developed by Faber
4 et al. (1995, 1996), in which they identify three fundamental purposes (or *tele*, singular *telos*)
5 that serve the wellbeing of all living organisms, human beings included. These are: 1. self-
6 maintenance, development and self-realisation; 2. replication and renewal; and 3. service to
7 other species or the whole of nature. Faber et al. (1995, 1996) argue that deficiency in the
8 third telos – service – is a basic feature of industrial societies, which leads to an imbalance in
9 the impacts that humans have on nature and on each other, due to over-emphasis on the first
10 two tele – self-realisation and renewal. We understand this characteristic of imbalance to be
11 symptomatic of Wicked Problems (Rittel & Webber 1973; Farrell 2011), which, having been
12 brought about by modernisation, cannot be resolved through further modernisation. Linking
13 this to the history of colonisation, we extend the interpretation to the management of Utría
14 National Park.

15 We find that at least three aspects of managing Utría National Park today fit well with the
16 definition of Wicked Problems. Firstly, the Park area is linked to global trade and
17 international industrialised capitalism through resource extraction. Although 'meta-industrial'
18 in the sense of the word as proposed by Salleh (2009), i.e. with limited integration into the
19 global industrial economy, *all* the local communities in Utría take part today, to some extent,
20 in trade. Secondly, in spite of limited growth in ecotourism in recent years, its promotion by
21 local entrepreneurs and the National Government (DNP 2007, 2008) directly links Utría to the
22 contemporary global economy. And third, the very idea of 'national parks' can be understood
23 as a direct response to environmental problems created by industrialisation (West et al. 2006;

1 Robbins 2004), especially when linked to global conservation discourses arising in industrial
2 societies (Heikkinen et al. 2010), as is the case with Utría.

3 We use Faber et al. (1995, 1996) three-tele heuristic to study the management of Utría
4 National Park as a Wicked Problem because it shifts attention away from the search for
5 solutions, which is presumed to be futile for Wicked Problems, and onto unpacking the
6 complexity of relationships between the stakeholder communities and their shared
7 environment. In this way, we replace study of the irresolvable problem of how best to manage
8 ecotourism in the park with study of how of the park, as environmental place, is constituted
9 through the relationships between the stakeholder communities making use of it (Farrell
10 2008).

11 We build our argument in three steps. First we provide support for our claim that the
12 management of Utría National Park is a Wicked Problem. Second, we explain our criteria for
13 applying the three-tele heuristic as a set of deductive research categories. And finally, we
14 assess the data collected using that heuristic, exploring the degree of balance across tele in
15 each of the stakeholder communities studied. Ecotourism serves throughout the text as a
16 transversal link between the various economic activities and sectors included in the study.

17 To the best of our knowledge, Faber et al.'s (1995, 1996) heuristic has not been applied
18 empirically in this way before. In developing criteria to guide this application we hope to also
19 provide some concrete points of reference for future research that shifts the focus in
20 environmental value conflict analysis away from articulated values and onto processes of
21 value articulation (Farrell 2007). Whereas direct relationships between conflicting values may
22 be identified, for example, by building inductive interpretations based on reference to
23 empirical data (Puhakka et al. 2009), approaches based on reference to discourse draw into
24 the frame relationships between the differing objectives of respective actors (Hajer 1995).

1 Along similar lines, we complement here study of conflicts between articulated environmental
2 values with data concerning underlying purposes. In this way we propose a new approach to
3 the study both of environmental conflicts and of Wicked Problems, intended to provide
4 insights into how it may be possible to simultaneously achieve long-term sustainability and
5 peaceful coexistence of groups with different environmental values (Ives & Kendal 2014).

6 **2 UTRÍA, A PLACE OF ENVIRONMENTAL CONFLICTS**

7 Utría National Park is part of the Chocó bioregion in Colombia. It is located in the northwest,
8 near the border with Panama (see Map 1), in an area considered a biodiversity hotspot (Myers
9 et al. 2000). The park, which was established in 1987, covers an area of 54,300 hectares, and
10 is designated by the national environmental authority as a high priority for conservation. It
11 was founded ‘[...] [w]ith the objective to preserve the flora, fauna, scenic natural beauty,
12 geomorphological complexes, historical or cultural manifestations, for scientific, educational,
13 recreational or aesthetic purposes [...]’¹ (DO 1987, p. 6) and is currently under the jurisdiction
14 and administration of the Ministry of Environment.

15 [MAP1]

16 The area combines an exceptionally high rate of precipitation (>10.000 mm per year), a series
17 of gulfs and bays, and a mountain range, with some of the world’s most productive and
18 biodiverse ecosystems, such as coral reefs, mangrove forests, rainforests and river estuaries.
19 The area of the park overlaps with territory of the Embera indigenous community, and both
20 the area and natural resources around the park are used by local Embera and Afro-descendant
21 communities (PNN 2006). Currently, both local communities depend, to varying degrees, on
22 agriculture, fishing, forestry, hunting, tourism and conservation. The National Park itself

¹ Original text translated from: ‘[...] [C]on el objeto de conservar la flora, la fauna, las bellezas escénicas naturales, complejos geomorfológicos, manifestaciones históricas o culturales, con fines científicos, educativos, recreativos o estéticos [...]’.

1 relies on tourist entrance fees, international cooperation funds and a small budget provided by
2 the central government which is, however, insufficient to allow the park authority to control
3 the area (PNN 2006).

4 **2.1 Utría's Wickedness**

5 In order to justify our proposition that the management of Utría National Park is a Wicked
6 Problem, it is necessary to look back in time. Although information about the precolonial
7 period of the region is limited, studies suggest that prior to arrival of the Spanish the area
8 served as a corridor for indigenous communities moving between Ecuador, Colombia and
9 Panama along the rivers of the tropical rain forest (CCGLR 2007; Ulloa 2004; OREWA
10 1995). Although Colombia was first colonised during the 16th century, Chocó was not under
11 Spanish control until the mid-17th century (Ulloa 2004; Jimeno Santoyo et al. 1995;
12 Colmenares 1975). For the Spanish, Chocó was an area of strategic interest, as the San Juan
13 Isthmus provided an interoceanic link between the Pacific Ocean and the Caribbean Sea
14 (Jimenez 2002; Meza 2010). Spanish colonist mined gold for export to Europe using the slave
15 labour of Africans forcibly brought across the ocean by Europeans as part of the Atlantic
16 triangular trade that lasted for centuries, throughout the latter period of European
17 industrialisation (CINEP 1998; Tovar Pinzon 1997). The presence of African slaves, in
18 particular, substantially disrupted the Emberá's use of the region (Ulloa 2004) and studies
19 suggest that they started to settle, during the 17th century, in the lower and middle parts of the
20 river basins, including within the area now associated with Utría National Park (CCGLR
21 2007; Jimeno Santoyo et al. 1995). At the same time, escaped slaves also began to settle along
22 the Pacific Coast in remote areas (Meza 2010), including around the area now associated with
23 Utría National Park. While escaped slaves had no rights during the colonial period, there was
24 some acknowledgement by settlers of both the territorial and human rights of indigenous
25 peoples, and the Embera were able to make use of the resources of the area with minimal

1 restrictions. In 1810 a revolution took place in Colombia, ousting the colonial Spanish
2 governors and resulting in establishment of an independent Colombian state. Although the
3 human and civil rights of Colombia's enslaved population were not fully recognised at that
4 time, slavery was abolished shortly after independence, establishing the basis for the
5 descendants of escaped and freed slaves to also make claims to use the resources of the park
6 area.

7 We take the historical moment of the 1810 revolution as the point in time when the idea of
8 Utría National Park became possible, and also as the time when the current composition of
9 contestations concerning the disposition of the park began to take shape. At that time escaped
10 and freed slaves, the Embera and the Colombian revolutionary elites all had reasons to claim
11 rights to make use of the area. What makes their contestation a Wicked Problem is the
12 composition of interested actors, which depends directly on the ways in which European
13 industrialisation influenced the coming into being of Utría National Park. More specifically,
14 we identify not Utría National Park itself, but rather its management as the Wicked Problem
15 in question. This is based, in the first instance, on each of the three stakeholder communities
16 having a differently constituted but equally legitimate claim, under Colombian law, to make
17 use of and manage the resources of both the park and residual off-park benefits. Secondly,
18 their respective claims, rooted in three completely different relationships to the history of
19 global industrialisation, are not mutually exclusive, making it impossible to define a 'correct'
20 answer to the question of how best to manage use of the park today. Instead, as with all
21 Wicked Problems, there are a variety of more or less acceptable solutions, the quality of
22 which can be measured only through reference to the respective interests and values of the
23 communities of stakeholders involved in contesting the problem.

24 **3 USING FABER ET AL.'S THREE-TELE AS AN ANALYTICAL HEURISTIC**

1 Our reading of Faber et al.'s (1995) heuristic, which has guided the organisation and analysis
2 of the comparative data presented here below, is motivated by their interpretation of
3 Aristotle's notion of *entelechia*, which literally means "having an aim (telos, pl. tele) in
4 itself" or 'having its determination in itself'" (Faber et al. 1995, p. 45). They base their
5 approach on the claim that there is advantage to using teleological instead of mechanical
6 reasoning when exploring problems of sustainability, because teleological reasoning seeks to
7 understand events in terms of their relationship to the future, or *causa finalis*, instead of
8 looking only at the past and present, or *causa efficiens*. The presence of *entelechia*
9 presupposes that the object or process in question will tend toward a particular state. It can be
10 extended to the idea of human intention, in general, and so also to values, in so far as these are
11 understood to be embedded within more general value systems, from which *entelechia* are
12 derived. Faber et al. develop a teleological taxonomy of three basic life sustaining behaviours
13 of living organisms, on the basis of which, *in combination*, they propose, all actions of living
14 nature can be understood to be motivated: (1) self-maintenance, development and self-
15 realisation, which encompasses an organism's basic needs for food, protection, shelter and the
16 fulfilment of its full potential; (2) replication and renewal, which serves to ensure
17 continuation of the species and its evolution and; (3) service to other species or the whole of
18 nature, including e.g. serving as food for other organisms, which ensures the ongoing
19 relevance of the organism type for its context or habitat. They identify excessive attention to
20 the first and lack of attention to the third telos with the ability of industrialised human
21 societies to impose human interests onto the living nature around them and specifically relate
22 this to the presence of ecologically problematic imbalances between human and non-human
23 nature in industrialised settings.

24 By using their three-tele heuristic we are able to sidestep the wickedness associated with
25 managing Utría by avoiding debate regarding whose interests should prevail and why.

1 Building on Farrell's (2008, 2011) reading of Marcuse's (1964) position on technology as
2 ideology, we focus not on the technical but instead on the teleological question of how these
3 conflicts are created and recreated through purposive relationships between the different
4 communities, with respect to the park area. This allows us to replace discussion of conflict in
5 terms of dissent and disagreement with discussion of opportunities, synergies and
6 complementarities. Faber et al.'s (1995; 1996) heuristic helps us to '*break the fourth wall*' of
7 Wicked Problem solving by providing us with a set of deductive categories for encoding
8 teleology. Data collection and analysis are organised to relate each party's teleological
9 perspective to the others' in a way that is comparative but does not require commensuration
10 (Farrell 2007:23). Using the tele in this way, we are able to develop a set of interpretations of
11 how the underlying purposes of one community are related to those of the others, and to
12 explore how each of these is supporting or hindering the potential of the Utría community, as
13 a whole, to use the park together, harmoniously, avoiding conflict while achieving sustainable
14 management of ecotourism in and around the park area.

15 Faber et al. (1995, 1996) posit that a living organism is viable when its own *entelechia* are
16 balanced and in harmony with the living nature around it. This state, where all three tele are
17 present and have more or less equal emphasis, provides us with our logical point of reference
18 for using the three-tele here as a heuristic. Based on our reading of their arguments we
19 presume: (i) that each telos can be independently identified, and that, in so far as it is present
20 at all, it is present in a relatively stable way, in its own right; (ii) that all three tele are,
21 nonetheless, clearly related with one and other, enjoying at least some degree of overlap; and
22 (iii) that the relative intensity of emphasis on each of the three is more or less balanced in a
23 viable living organism. For the purpose of our present analysis, we aim simply to identify the
24 presence or absence and relative emphasis of attention to each of the three tele, among the
25 three stakeholder communities studied: always with a view to the empirical domain of

1 ecotourism. These data, in turn, provide us with the basis for conducting a preliminary
2 analysis of the potential for avoiding escalation of conflict in the region, based on the
3 assumption that balanced emphasis of attention across the three tele, across the three
4 stakeholder groups, would both help to deescalate conflict and favour sustainable
5 management of ecotourism.

6 **3.1 Field data collection procedures**

7 Primary data reported upon here were collected during interviews and field observations in
8 January and October 2015. The first author spent a total of 2 months living in the area and
9 conducted 32 thematic interviews with a total of 50 people, sometimes in groups, mostly with
10 individuals. As shown in Table 1, most respondents were members of either the Afro-
11 descendant community of El Valle, who live beside Utría National Park or the Embera
12 community of Alto Río Valle-Boroboro reservation, whose territories include the park area.
13 Both communities, and the park, are situated within the legal municipality of Bahía Solano.
14 Data concerning the perspective of the Park Administration was drawn from interviews and
15 official publicly-available documents. All but two of the interviews were recorded and
16 consent for the use of interview content was secured in all cases.

17 [TABLE 1]

18 Informants from the Afro-descendant community were selected for interview based on their
19 links to the eco-tourism sector and to productive chains connected to it, with most of them
20 deriving at least part of their basic income from this activity. This criterion was not applied to
21 the selection of informants from the Embera community: on the one hand, because their
22 participation in eco-tourism is, on balance, rather limited and on the other, because the terms
23 for securing permission to interview members of this community included a degree of self-
24 selection on their part, in keeping with the preferences of these informants. Informants were

1 strategically selected, so far as possible, in order to provide good coverage of the main
2 ecotourism activities underway in the area (Robbins 2004), with the distribution of interview
3 informants by activity type, being as follows: tour guides (n=4), transportation (n=2), artisans
4 (n=3), hotel services (n=5), Park Administration (n=3), boat drivers (n=4), fishermen (n=2),
5 restaurant owners (n=2) and local authorities (n=3), members of the Embera community
6 (n=22). Of the 50 informants, 15 were female and 35 male. However, we have not
7 disaggregated response data based on gender for the present study.

8 In order to develop a general picture of the relationships between and concerns of these
9 communities, with respect to their rights to use natural resources, the interviews were not
10 limited exclusively to the theme of the Utría National Park (cf. Marcus 1995). Rather, the
11 park was included as one theme, among others, presented for discussion, in an effort to elicit
12 data concerning the respondents' general views regarding local realities and concerns
13 (Heikkinen et al. 2016). The following nine key themes, drawn from a previous scoping
14 study, were used to structure the interviews, through which we sought to identify respondents'
15 main concerns about the area: family history, tourism, transportation, infrastructure, public
16 services, governance, national park, presence of governmental agencies and armed conflict.
17 Recorded interviews were transcribed verbatim and all interview data were analysed using the
18 N-VIVO software programme to conduct content analysis (Krippendorff 2012; Bernard
19 2011). We structured our analysis through reference to Faber et al.'s (1995) three-tele, which
20 provided the three core deductive categories used to sort these data. Every transcribed
21 interview was reviewed and its content classified into these categories (Hsieh & Shannon
22 2005). To perform this sorting, transcribed and in some cases annotated interview data were
23 partitioned into category-relevant utterances, which were then assigned to one or more of the
24 three tele. Each utterance consists of documented words expressed by a respondent or found
25 in an official statement, which make reference to something, describe an action of someone,

1 or refer to a specific event (Habermas 1979). Our analysis is mainly based on the narratives of
2 the informants, complemented by reference to field observations, official statements and
3 related academic literature. The source data employed are not the intentions or activities of
4 the informants but rather their utterances concerning attention to those intentions and
5 activities. An overview of the key concepts employed to execute this encoding is presented in
6 Table 2.

7 [TABLE 2]

8 **3.2 Developing Criteria in order to use the three tele as a Heuristic**

9 Telos 1: Self-maintenance, Development and Self-realisation

10 In order to better reflect collected data, we partitioned data for this telos in two parts: (i) self-
11 maintenance; and (ii) development and self-realisation. We define the former as the search for
12 a livelihood, shelter, food, sustenance and income, which can be done by individuals or in
13 community. Utterances assigned here relate to the economic sectors of the communities,
14 including, agriculture, tourism, fishing, forestry, hunting and conservation. A typical encoded
15 reference would be: ‘We do line fishing and also do drop line fishing. The drop line fishing is
16 where we put a thousand or two thousand hooks attached to the line. We also have
17 [something] called lifters, [which are] rafts with a fishing line about 15 fathoms long.
18 Attached to those lifters we tie a stone to the fishing line so the current does not take it away
19 [. . .]’^{2,3}.

² Translated from: ‘*La [faena la] hacemos a línea de mano y la hacemos también a espinel. Espinel es el que le ponemos mil o dos mil anzuelos con una cantidad de sedal que utilizamos. También tenemos [algo a lo que le] decimos alzadera, unas balsas con sedal, unas 15 brazas de largo. A esas alzaderas le ponemos la piedra como para que agarre el espinel y no lo deje que la corriente se lo lleve [. . .].*’

³ From this point forward, all original texts are in local vernacular Spanish and were translated into English by the first author, who is native Spanish speaker, in collaboration with the second author who is a native English speaker.

1 We define the second part of this telos, development and self-realisation, as having to do with
2 development of the individual or the community, directed toward realising its full potential.
3 Data encoded here include references to public services that influence the development and
4 the self-realisation of individuals, such as, education, sanitation, healthcare, infrastructure and
5 security.

6 Telos 2: Replication and Renewal

7 Again, based on the composition of collected data, we also partitioned this telos in two parts:
8 (i) replication and (ii) renewal. Under the former we include utterances concerning human
9 sexuality and biological reproduction, and the maintenance of kinship ties; under the latter,
10 utterances concerning social norms and customs of the community. We take these latter
11 utterances to reflect the basis for institutions and for recreating community, over time, as they
12 are passed down from generation to generation (Berger & Luckmann 1991; Nanda & Warm
13 2014). Encoded utterances related to renewal included, for example: ‘[for] vegetables, we are
14 in a group of women, [called group] of the yards that gives one [seeds] to sow, to have one’s
15 yard, to take one’s daily bread, one’s vegetables. The tomato, for example, is sown in this
16 way for one’s own consumption’⁴

17 Telos 3: Service to other Species or the Whole of Nature

18 We have assigned utterances to this telos based on their attention to the service that human
19 beings may provide to the ecosystems they are using. According to Faber et al. (1995)
20 emphasis on this telos ensures the ecological relevance of a given organism and also provides
21 for maintenance of the ecosystem, which supports realisation of the first and second tele. Here
22 we include reference to two types of attention: (i) direct concern with providing service to

⁴ Translated from: ‘*[para] la verdura, estamos en un grupo de mujeres, [llamado grupo] de las azoteas que le dan a uno pues [las semillas] para sembrar, para tener uno su azotea, su pan coger, su verdura. El tomate entonces ya uno lo siembra y para el consumo de uno.*’.

1 other species and (ii) utterances concerning service related patterns of human behaviour.
2 Utterances of the first type have more of an instrumental focus on maintaining the
3 productivity of the whole of nature whereas those of the latter type are more related to social
4 practices and taught and learned behaviours. Here, we encoded, for example, for the latter
5 category, utterances such as: ‘we go to schools, we give talks to children about caring for the
6 turtles, why we should conserve the turtles, about littering [. . .], all of which is a threat to the
7 turtles.’⁵

8 **3.3 Putting the pieces together: Applying these criteria to the field data**

9 Utterances were assigned to tele categories based on their object of signification - Afro-
10 descendant, Embera or Park Administration - to serve as representations of the collective
11 understanding of the respective stakeholders’ teleological disposition,⁶ with regard to Utría
12 National Park. Based on the logic of the three tele heuristic, where balance across all three
13 tele is presumed to indicate viability, we considered, for each interview, whether or not its
14 utterances suggested a balanced attention across the three tele in the signified community.
15 Based on the numbers of encoded utterances in an interview, interviews were assigned, based
16 on the community signified in the utterances, and their tele encodings, to one of seven telos
17 weighting categories (see Table 3). Category assignments were based on reference to a
18 quartile interval of $\pm 25\%$ around the value that would indicate balanced attention across the
19 three tele: the mean number of utterances across all tele, pertaining to a specific stakeholder
20 community. For example, the interview with respondent #10 yielded 49 encoded utterances,
21 based upon which a total of 29 Telos 1 flags, 9 Telos 2 flags and 11 Telos 3 flags were

⁵ Translated from: ‘*Nosotros vamos a los colegios, le damos charlas a los niños sobre el cuidado de las tortugas, por qué hay que conservar las tortugas, sobre la tirada de la basura [. . .] que todo eso es una amenaza para las tortugas.*’

⁶ Compound utterances, with more than one community signified, were treated, for encoding purposes as two separate utterances.

1 assigned.⁷ Among those utterance where the Afro-descendant community was the signified
2 object, the signification distribution was 20 (Telos 1), 18 (Telos 2) and 14 (Telos 3); in this
3 case the Telos 1 count was above the balance interval, the Telos 2 and 3 below and so the
4 interview was assigned to the category Single Telos 1 emphasis. For respondent #22 the
5 distribution was 27 (Telos 1), 21 (Telos 2), and one (Telos 3). With Telos 1 and Telos 2
6 above the balance interval, and Telos 3 below, this interview was assigned to the category
7 Telos 1,2 emphasis. For informant #4, the distribution was 31 (Telos1), 19 (Telos 2), 10
8 (Telos 3). In this case, with Telos 1 above the balance interval, Telos 2 within it and Telos 3
9 below, the interview was assigned, due to its imbalance, to the category Single Telos 1
10 emphasis. As can be seen in Table 3, there is a strong tendency across the interviews to
11 identify concern with Telos 1 and/or Telos 2. However, these interview specific data cannot
12 be easily compiled to give an aggregate representation. In order to develop a better sense of
13 the overall tendencies and to crosscheck these results, we conducted the same assessment
14 taking all utterances together (see Table 4). These aggregated data, which produce the same
15 results as the interview specific data, help to guide our analysis in the following pages.
16 However, these data, alone, are insufficient to support our argument and so we complement
17 them also, with a review of ratios between utterances across the tele, which directly
18 juxtaposes the levels of attention expressed by our informants, and with reference to our
19 experience in the field and to literature, in order to build our discussion.

20 [Table 3]

21 **4 A TELEOLOGICAL PERSPECTIVE ON UTRÍA'S WICKEDNESS**

22 A predominance of utterances associated with the opportunities and limitations that
23 respondents experienced in their political, economic, spatial and social circumstances, can be

⁷ In the event of two tele being addressed in a single utterance, this utterance was assigned more than one telos flag.

1 understood to reflect a general emphasis of attention on telos 1, self-realisation. Based on the
2 encoded data, the main concerns reported by the informants are as follows. For the Afro-
3 descendant community, there is concern about the need for major investments in the port and
4 the airport of the region, in order to give a lift to the local economy. For instance, one Afro-
5 descendant informant stated: ‘one of the demands made here, so that it is possible to provide
6 an efficient service of tourism, is the need for infrastructure projects that would provide
7 logistical support, hence the airport [. . .], so we can say that this is an area suitable for
8 ecotourism, and the different branches of tourism, ethno-tourism, agro-tourism. We need to
9 meet basic standards.’⁸

10 For the Embera community, a major concern is food security, as they have seen the fish and
11 game populations diminishing in recent years. For example, an Embera informant stated that,
12 ‘[. . .] with respect to the animal population; it has decreased. As the [human] population has
13 grown that of animals decrease, as the [human] population grows the number of fish also
14 decrease.’⁹

15 These concerns were also linked by respondents from both communities with the desire to
16 expand commercial trade. While the park itself is seen as a source of income and livelihood
17 for all three stakeholder communities, a main concern of the Park Administration is a lack of
18 funds for its activities, as stated by one of our Park Administration informants: ‘[. . .] the only
19 thing missing [for management] is that the budget assigned by the State is insufficient to hire
20 the personnel required in order to perform our assigned activities [. . .] [with respect] to the

⁸ Translated from: ‘Una de las exigencias que acá se planteaba para que acá se pudiera prestar un servicio eficiente de turismo, se planteaba en su momento que tenía que generarse obras de infraestructura que brindarían como ese apoyo logístico, entonces el aeropuerto, [. . .] para que podamos decir que esto es una zona apta para el ecoturismo, en las diferentes ramas del turismo, el etnoturismo, el agroturismo bueno. Necesitamos tener condiciones básicas.’

⁹ Translated from: ‘[. . .]según la población de animales, ha disminuido. Según ha crecido la población los animales disminuyen, según va creciendo la población los peces van disminuyendo también.’

1 management plan, which is our navigation chart for the coming five to ten years'¹⁰. This is
2 complemented by statements from the other two communities that the park could do more to
3 benefit them. We also found concern about security, associated with the armed conflict in
4 Colombia, among all three communities.

5 As regards to the first part of the second tele, replication, three key factors mentioned in both
6 the recorded interviews and the reference literature (DA 2012; DSP 2011; DANE 2010; Meza
7 2010) point to a relatively strong emphasis on this telos. Among respondents from the Afro-
8 descendant community there is a perceived need for increasing the local labour force available
9 to work in agriculture and fishing. In addition, the availability and improving quality of
10 healthcare access in the region, along with other factors, has led to drops in infant mortality
11 rates and associated increases in population. Finally, among the Embera community there is a
12 trend toward migration into Afro-descendant community towns, where children are able to
13 complete their secondary education. With respect to the second aspect of this telos, renewal,
14 the collected data indicate that emphasis on this telos is related to the perceived
15 ineffectiveness of current institutions, of both the state and the communities, in setting and
16 enforcing rules. For instance, informants from the Afro-descendant community expressed
17 concerns about their ethnic-territorial administrative body, the *Concejo Comunitario*, losing
18 its legitimacy, and about the ineffective management of some public agencies. However,
19 informants from both the Afro-descendant and Embera communities found that the Embera's
20 ethnic-territorial administrative body, *Cabildo*, has retained its capacity and autonomy, as is
21 reflected in the statement of this Emera informant: '[. . .] speaking about the environment, that
22 is what we [*Cabildo*] oversee today. Since our own government was constituted, everything is

¹⁰ Translated from: '[. . .] lo único que falta [para el manejo] es que el presupuesto del estado no nos da como para contratar suficiente personal, que es lo que necesitamos para desarrollar las actividades que son misionales [. . .] [en relación a] los planes de manejo que son la carta de navegación de unos cinco a diez años'.

1 managed by the rule of our own government, all the fauna and all the forests.’¹¹ However,
2 concerns were also expressed by Embera community respondents regarding the *Cabildo’s*
3 effectiveness and its focus on the wellbeing of individuals.

4 Ecotourism, which has attracted investment from the central government into the region, was
5 also mentioned in relation to increasing attention to preservation of the scenic natural beauty
6 of the area. However, this was closely linked also to telos 1, by the informants who
7 mentioned, for example, a recent revival of mixed cultural expressions based in the heritage
8 of the Afro-descendant community (cf. Jaramillo 2006), with presentations of traditional
9 Afro-descendant folk songs, which was being offered commercially as part of the regional
10 tourism experience. Informants from the Embera community also expressed attention to
11 culture, although mainly in terms of their concerns about the loss of traditions, such as
12 clothing and architecture, and a general consternation among the elders that the youth are
13 introducing Spanish words into the Embera language, which they attribute to the public
14 educational system. Finally, there was recurrent attention among all three stakeholder
15 communities to the social importance of the Park Administration as an actor responsible for
16 promoting and contributing to good relations between the communities and to the formal rules
17 concerning rights to use Utría’s resources, which are set and enforced by the Park
18 Administration.

19 As regards the third telos, service, here we have encoded utterances concerning attention
20 given to conservation initiatives, as they reflect human effort invested to serve other species
21 and living nature, including, for example the following statement of an Afro-descendant
22 informant: ‘A very recent organisation is friends of Tundó [river], which is a community
23 organisation. We are 15 people. The mission of this organisation is to take care of Tundó

¹¹ Translated from: ‘[. . .], hablando en la parte de ambiente, todo eso es lo que nosotros miramos, hoy día. Desde que se conformó el gobierno propio es manejado bajo la regla del gobierno propio, toda la fauna, todos los bosques’

1 River [. . .] so they [neighbours] understand the importance of mangrove ecosystems, [. . .] the
2 goal is that once we have an organised platform to look for support from NGOs [. . .] these are
3 very large projects where we will need support from NGOs and local organisations.’¹²
4 However, unlike data concerning attention to the previous two tele, we find almost no
5 reference to exclusive attention to the third telos. Mention of conservation projects is related,
6 for example, to income generating activities such as ecotourism, private donations and
7 financial transfers from the state, all of which reflects links back to realisation of the first
8 telos.

9 [TABLE 4]

10 Taking a closer look at the relative emphasis of attention across the tele, as presented in Table
11 4, the encoding and categorisation reflect how attention to each of the three tele is related to
12 attention to the other two, within the universe of utterances documented in this study. In the
13 case of the Afro-descendant community, strong emphasis on the first telos has the effect of
14 lowering the relative intensity of documented attention to the other two. Here the ratio of
15 encoded references associated with the first versus the second tele is nearly 2:1, and between
16 the first and the third nearly 4:1. While use of the three-tele as a heuristic to organise these
17 data is still a new approach, these results are consistent with the position expressed by our
18 informants: ‘but as I’ve told you, [. . .] although everyone is out for themselves, that’s not the
19 way of doing things. You get more [working together] than with each individual working for
20 themselves. Because, no one is going hand money to you if it’s just you [. . .] if you are in

¹² Translated from: ‘Una organización muy nueva que se llama amigos de Tundó, es una organización comunitaria. Somos 15 personas. La misión de esta organización esta fundada en cuidar el río Tundó [. . .] para que ellos [vecinos] entiendan la importancia de estos ecosistemas de manglar [. . .] la meta esta en que en el momento en que tengamos la plataforma organizada buscar apoyo de ONGs. [. . .] Estos son proyectos muy grandes donde si vamos a necesitar apoyos de ONGs y organizaciones locales’

1 group, it is better than individually'¹³. Here the informants' position reflect that their
2 community has moved, in recent years towards, more individualistic behaviour (cf. Rappaport
3 1979, p. 165), working in community mainly to realise first telos.

4 In data collected from interviews with the Embera community, the first and second tele are
5 given more or less equal attention, with the ratio of encoded utterances being nearly 1:1.
6 Among all encoded data, the ratio was nearly 5:1 for attention to both the first and to second
7 tele as compared with attention to the third. Although it is not possible to say, based only on
8 these data, why the ratios are so unbalanced, this is at least partly related a preoccupation with
9 food security, related to the first telos, and concerns about the loss of traditions and ways of
10 the Embera, related to the second. These concerns were linked to population growth by
11 respondents but it is likely that they are also related to the proximity of other communities,
12 which are also growing, and to the borders and restrictions applied on the Embera
13 community's use of the park area by the presence of the Afro-descendant community and the
14 Park Administration.

15 Data regarding the tele emphases of the Park Administration show a lower degree of overall
16 variability, with roughly 5 utterances giving attention to the first telos for every 3 giving
17 attention to the third. However, these data also repeat the balance of emphasis between the
18 first and second tele observed in the responses of the Embera community informants, with
19 attention given at nearly a 1:1 ratio across the two categories. Here the pull toward the first
20 two tele appears to be related to concerns about limited funds for administering park
21 management activities, while the better overall balance reflects the Park Administration's
22 official duties, or formal *entelechia*, which explicitly oblige it to pursue realisation of all three
23 tele.

¹³ Translated from: '[. . .] pero como le digo, [. . .] como que cada quien esta por lo de uno, a penas y así no se consiguen las cosas. Uno se consigue mas asi [trabajando juntos] que haciendo individual. Porque individual a nadie le van a regalar plata [. . .] si uno está así en grupo, se va mejor que así individual.'

1 5 **WORKING WITH UTRÍA'S WICKEDNESS**

2 In the management of Utría National Park, based on current Colombian and international law,
3 the local Afro-descendant community, the local Embera community and the Park
4 Administration all have legitimate claims to rights of use. The ability of each community to
5 realise its rights depends on both the ecological limits of the system and on the actions and
6 decisions of the other two communities. While there is a broad consensus in favour of
7 continuing ancestral practices of resource use, subject to good standards of sustainable use,
8 there is no universal standard against which it may be judged what precisely that means. In
9 light of the region's recent history, misunderstandings on this point could turn quickly into
10 conflicts. By using Faber et al.'s (1995) three-tele as a to explore how each of these three
11 communities uses and relates to the park area, we are able to develop some propositions
12 regarding the potential for achieving what we would call, following Barry (1999) an
13 environmentally virtuous shared use of the park by all three of the studied communities.

14 The three tele heuristic allows us to analyse and process an array of data concerning the
15 contesting visions of these three communities in an orderly and, we hope, also coherent
16 manner. Based on reference to informant interview responses and to field notes approved for
17 referencing in this paper, we have applied a comparative analysis of the teleological emphases
18 of the three respective stakeholder communities studied. The results suggest a general
19 deficiency in attention to the third tele, service, across all three communities. Recalling Faber
20 et al.'s (1995; 1996) proposition that industrialised human societies, and we would argue also
21 Wicked Problems (Farrell 2008; 2011), are characterised by insufficient emphasis on the
22 service tele, we advance the normative proposition that fostering balanced attention across all
23 three tele might constitute a means for side-stepping the Wickedness of potential
24 environmental value conflicts, related to the expansion of ecotourism in and around Utría
25 National Park. These results provide us with a logical basis for developing recommendations

1 regarding how it might be possible to avoid exacerbating conflict while also enhancing
2 sustainability.

3 While we find this application of the heuristic has promise, we also encountered some
4 limitations. For example, we had problems with the assignment of categories, because
5 distinctions sometimes implied a level of knowledge concerning respondents' views on, for
6 example, the nature of human potential, which was beyond the scope of our study. We also
7 found it necessary to expanded the concept of renewal to include attention to social norms and
8 customs, which, although based on our interpretation of Faber et al. (1995, 1996), is not
9 explicitly discussed by them in this way. In addition, our choice to focus on encoding
10 utterances, which was intended to help ensure that the encoding reflected not only our
11 understanding of the heuristic both also the understanding of our informants, nonetheless
12 limits the scope of our interpretations to what was said, leaving aside what might have been
13 meant. And as is always the case with empirical social research, we must presume that both
14 our presence in the field, and our efforts to collect data compatible with the three-tele
15 heuristic have had some effect on responses.

16 Nonetheless, we are encouraged to draw some inferences from these results. First, and
17 foremost, based on the proposition that strengthening attention to third telos, could help to
18 support the achievement of a flourishing (Muraca 2011) coexistence between the three
19 stakeholder communities, we are optimistic about the possibilities for developing sustainable
20 ecotourism in and around Utría. This would imply, for example, a combination of education
21 within the respective communities, enriching understanding of their own environmental
22 impacts, with dialogue between the communities, concerning the effects that their actions
23 have upon each other and on the viability of the park. In keeping within the logic of Faber et
24 al.'s (1995) position, changes in the tele are not to be understood as atomised but as holistic.
25 So, we may expect an enhanced emphasis on self-realisation, for example, to be accompanied

1 by reduced emphasis in service, as was observed by Singh (2006) in the Nicobar Islands,
2 following the collapse of the local economy after the tsunami of 2004. But we may also
3 anticipate that enhanced emphasis on service, in a society lacking in balance across the tele,
4 might bring balance about.

5 **6 CONCLUSION**

6 In this paper we have aimed to identify potential for deescalating conflict while pursuing the
7 sustainable management of ecotourism in the area in and around Utría National Park in
8 Colombia. Our arguments are based on empirical study of the perspectives of three local
9 stakeholder communities: local Afro-descendant communities, the local Embera indigenous
10 community and the official state Park Administration. We have argued above that a Wicked
11 character of this park management problem can be traced to the colonial historical context
12 from within which the conflicting use rights claims of these three communities have arisen.
13 In place of focusing on the value conflict regarding how best to use Utría, which, being
14 Wicked, is presumed to be irresolvable, we have looked into the underlying purposes that
15 motivate stakeholders' attitudes towards the park area (Farrell 2008; 2011). Using Faber et
16 al.'s (1995; 1996) concept of the three tele of living organisms, where telos 1 is the purpose of
17 self-maintenance, development and self-realisation, telos 2 that of replication and renewal and
18 telos 3 that of service to other species or the whole of nature, we have sidestepped the trap of
19 looking for a concrete specific solution to an unsolvable problem by focusing attention
20 instead on the teleological question of the degree to which the three stakeholder communities
21 can be understood to be flourishing together, with each other and with the park. As predicted
22 by Faber et al. (1995), we found consistently low emphasis on the third telos among all three
23 stakeholder-communities. Following through on this logic, we propose that fostering attention
24 to the third telos could help to deescalate present and avoid future conflicts related to
25 ecotourism in and around the park area because it would increase the degree to which the

1 needs of both the other two communities and of the park area itself are included within the
2 *entelechia* of each of the three stakeholder communities. We also anticipate that there may be
3 some associated risks, as fostering attention to the third telos could reduce the resources
4 available for the other two tele in already marginalised Afro-descendant and Embera
5 communities.

6 Despite it reflecting a Eurocentric logic, we find that framing the sustainable management and
7 expansion of ecotourism in Utría National Park as a Wicked Problem has provided us with a
8 coherent and historically contextualised basis for exploring how it may be possible for
9 Colombia to protect this ecological hotspot while at the same time respecting the rights and
10 interests of the local and regional stakeholders living within and from the park area. By
11 combining this framing with an innovative application of Faber et al.'s three-tele heuristic, we
12 have been able to develop the following concrete advice for the governing authorities
13 concerned with ensuing that sustainable ecotourism, in the absence of conflict, is part of
14 Utría's future; foster among all three stakeholder communities, increased attention to telos 3,
15 service to other species and to the whole of nature, including service to the other communities
16 with legitimate claims to make use of the park.

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21 **Table 1.** Number of Interviews Conducted

	Interviews
Afro-descendant (Incl. 1 small group interview with two respondents)	23
Embera Community (Incl. 1 large group interview with 17 respondents)	6
Park Administration	3
Total	32

22
23
24 **Table 2.** Basis for encoding into Categories.

	Utterances concerned with...
Telos 1 Self-Maintenance, Development, and self-realisation	Livelihood, food, income, shelter, education for the individual, public services
Telos 2 Replication and renewal	Rules, institutions, social norms, community relations, cultural continuity, education

	into the community's rules
Telos 3 Service	Conservation, maintenance of ecosystems and ecological function, education provider in care for the environment

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Table 3. Aggregated emphasis count per tele by stakeholder community*

Signified Stakeholder	Count of Interviews Assigned to Weighting Categories							
	Balanced emphasis	Combined emphasis			Single emphasis			Total
	T1, T2, T3	T1, T2	T2, T3	T1, T3	T1	T2	T3	
Afro-descend.	4	2	-	1	21	-	-	28
Embera	2	11	-	1	6	4	1	25
Park Admin.	3	3	-	4	7	8	-	25
	9	16	-	6	34	12	1	78

3 * The total number of interviews was 32. The variation of values in the total column is because most
4 interviews included significations of more than one community, while not all communities were
5 signified in all interviews.

6 **Table 4.** Overview of the relative emphasis of attention across the tele, attributed to each of
7 the three stakeholder communities*

Afro-descendant Community				
28	Interviews including utterances encoded for the Afro-Descendant community as signified			
947	Total encoded utterances signifying Afro-descendant Community			
	T1	T2	T3	Average # of Utterances
Distribution of utterances across the Tele: all informants	541	263	143	316
Distance from the mean	-225	-53	-173	-
Quartile	1	3	4	-
Emphasis	<i>Favoured</i>	<i>Average</i>	<i>Low</i>	-
Distribution of utterances across the Tele: Afro-Descendant informants	469	219	115	-
Embera Community				
25	Interviews including utterances encoded for the Embera community as signified			
429	Total encoded utterances signifying Embera community			
	T1	T2	T3	Average # of Utterances

Distribution of utterances across the Tele: all informants	201	184	44	143
Distance from the mean	58	41	-99	-
Quartile	1	1	4	-
Emphasis	<i>Favoured</i>	<i>Favoured</i>	<i>Low</i>	-
Distribution of utterances across the Tele: Embera informants	169	142	34	-
Park Administration Community				
25	Interviews including utterances encoded for Park Administration as signified			
258	Total encodes utterances with signifying Park Administration Community			
	T1	T2	T3	Average # of utterances
Distribution of utterances across the Tele: all informants	104	95	59	86
Distance from the mean	18	9	-27	-
Quartile	2	2	4	-
Emphasis	<i>Average</i>	<i>Average</i>	<i>Low</i>	-
Distribution of utterances across the Tele: Park Administration informants	40	39	30	-

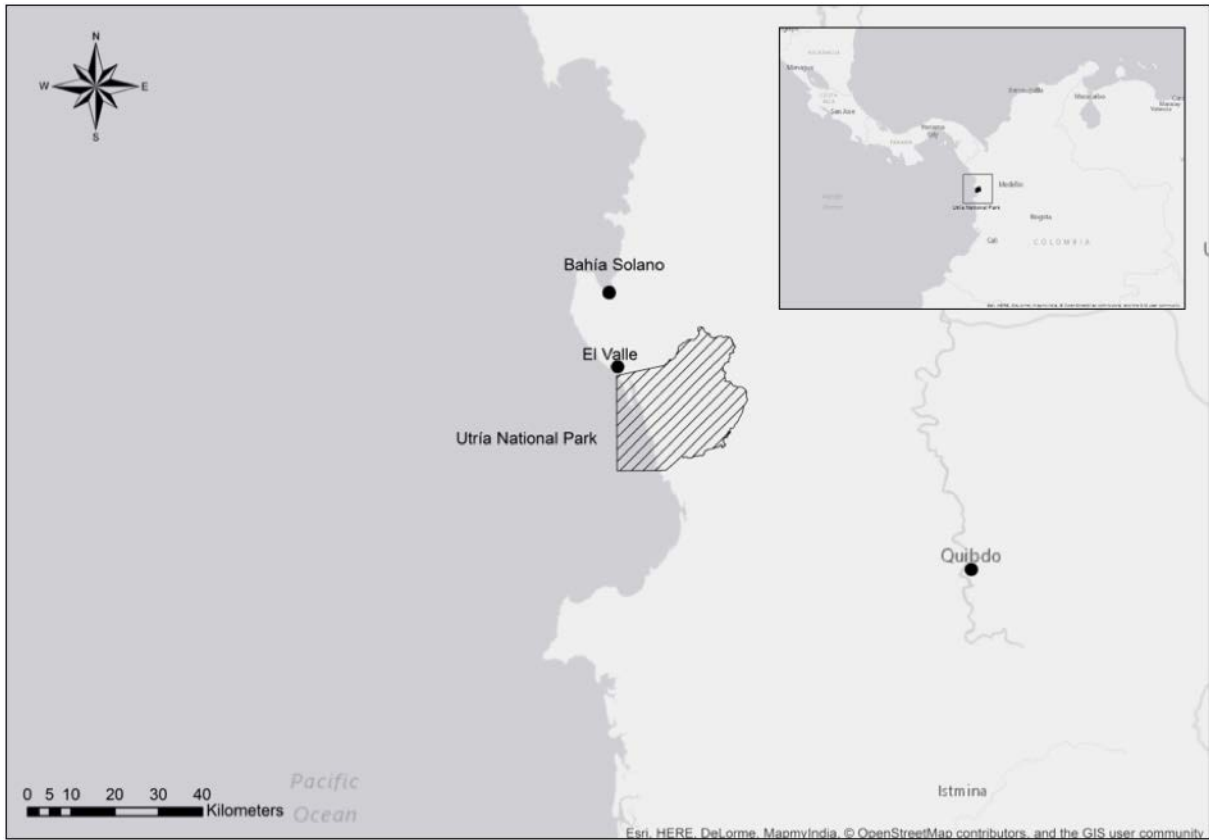
1

2 * Utterance were assigned, in all cases, based exclusively on the object of signification,
3 regardless of who made the utterance. The bias in favour of Afro-descendant and Embera
4 significations concerning the Park Administration, which reflects the distribution of
5 interviews, is disregarded for the purpose of the present analysis, as we are focused here on
6 overall collective understandings of teleological dispositions.

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9 **Map 1.** Location of the Study Area



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2 Source: Esri, HERE, DeLorme, MapmyIndia, Parques Nacionales Naturales de Colombia,
 3 OpenStreetMap. ‘This map was created using ArcGIS® software by Esri. ArcGIS®
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