

# The attitudes of tourists/day-trippers to alpine summer pastures. An investigation in four areas of the Italian Alps

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## 1. Introduction

Once considered exclusively as places of work and production, alpine summer pastures<sup>1</sup> are becoming more and more frequently integrated into the domain of alternative tourism. This phenomenon straddles nature tourism and rural tourism, although very little is known about its characteristics and the motivations and attitudes of those who participate in it. To broaden this knowledge, a quantitative investigation was carried out in the summer of 2003, where information was gathered from short, multiple-choice, closed-response questionnaires, which were completed by visitors in four different alpine summer pasture areas of the central Alps. Following a previous work (Corti *et al.*, 2006), where univariate and bivariate analyses of the entire sample were presented on the basis of all the responses to the questionnaire, in the present work attention is concentrated mainly on the differences between the various locations where the survey was carried out, with respect to four aspects: the reasons for the visit, the frequency of visits to similar locations, the general attitudes of visitors towards the alpine summer pastures and the grazing animals, and their specific attitudes with respect to the relationship between the alpine summer pastures and tourism.

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<sup>1</sup> Italian distinguishes the alpine summer pasture land and *malga*, the pastures plus associated buildings (accommodation for sheperds, milking sheds, etc.). Here the single term 'alpine summer pastures' is used and refers to the pastures with their buildings.

## 2. The questionnaire

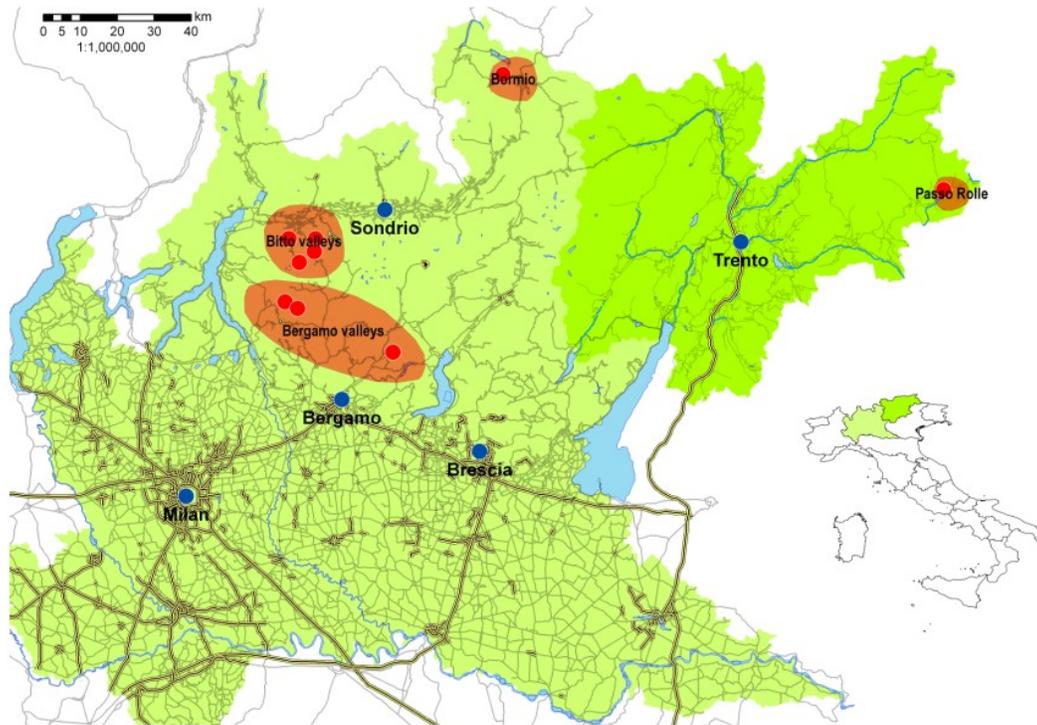
Given the circumstances of the interviews and the fact that they needed to be carried out in a few minutes without excessively inconveniencing the respondents, the survey was intentionally set out and structured in a simple and succinct way<sup>2</sup>. In its final form, reached after a first version was implemented in a test session before the actual survey was carried out, the questionnaire was composed of ten questions with a range of possible responses. In some cases the responses took the form of a choice between different options, in others statements were evaluated according to a five step Likert agreement scale (from 1, "not at all", to 5, "very much"). The questions addressed the reasons for the visit, attitudes towards specific environmental issues, regard for the animals, interest in the produce of the pastures, as well as the usual basic information about the interviewees (age, sex, level of education, place of residence). From some of the responses it was also possible to obtain information regarding certain concrete behaviour on the part of interviewees: how often they usually visited the pastures and the distance travelled between their home and the place of the interview.

The sample was obtained by approaching as many visitors as possible in and around the alpine summer pastures. It does not therefore not constitute rigorous statistical randomness, as it lacks information on the backgrounds of the visitors to the alpine summer pastures, but may be considered acceptable for the purposes of the enquiry, which does not claim to put forward probabilistically correct inferential estimations.

The interviews were carried out over the weekends between the end of July and the end of August 2003 in four different areas of alpine summer pastures, three in Lombardy and one in Trentino, differing in altitude and in the nature of the visits made to them. From west to east (Figure 1): the Bitto valleys in the Lower Valtellina, Taleggio valley and Gandino valley in the Bergamo mountains, the Bormio area of the Upper Valtellina and the Passo Rolle area in eastern Trentino. Despite their relative proximity, the Taleggio valley and the Bitto valleys have distinct environmental characteristics, distinctly pre-alpine in the former case, mountainous in the second case, and make use of quite different zootechnical practices in the alpine summer pastures.

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<sup>2</sup> The problems associated with measuring attitudes to the environment have been studied for some time, resulting in solutions generally based on a myriad and complex series of indicators (Struffi, 2000).



[Figure 1]

### 3. The four study areas

#### *The Bitto valleys*

Located in the western part of the Valtellina, the area includes the Gerola valley and the Albaredo valley, plus the municipality of Bema on the ridge between the two valleys. The settlements are situated at altitudes between 800 and 1,000 metres above sea level and all the municipalities which have their centres in the valleys have witnessed considerable depopulation in recent decades<sup>3</sup>. The working population for the most part commutes to the main centres of Valtellina (Morbegno and Sondrio).

Tourism in the Upper Gerola developed at the beginning of the 20<sup>th</sup> century and was linked to the presence of holiday homes belonging to the Morbegno middle classes. It was revived with the creation of the Pescegallo ski resort. Five hotels and a few refuges are located close to the Orobic watershed: Salmurano, which can be reached by the Pescegallo chair lift, Falc, Trona, with a mountaineering school, and, in the territory of Bergamo province, the Benigni refuge. Some of these are situated in the mountain summer pastures and, in some cases, they have been built with the aim of providing pastoralists with the possibility of exercising agri-tourism activities. Because the pastoralists showed little interest

<sup>3</sup> Although Pedesina currently has only 33 inhabitants, the population of the Bitto valleys is around 1,600 inhabitants.

in these activities, the refuges are generally rented out to specific managers by the Municipalities owning them. Agri-tourism services are only offered at one alpine summer pasture owned by the regional authority. In the Albaredo valley tourist facilities consist of an inn and three refuges: Legui, Alpe Lago, Alpe Piazza. The last two, as the names imply, are located in alpine summer pastures; one is run by the same managers who run the pastures. The Albaredo valley has the advantage of the road over the S. Marco pass (2,000 m) between the Brembana valley and the Valtellina.

Tourism in the area is generally of a local nature: it is easily accessed from Lecco and Brianza, as well as, of course, from Morbegno and nearby centres, and so day trips are possible. Thanks to the presence of refuges walks of several days can be undertaken, along the Orobie path or the paths that cross from the Valvarrone valley to the Brembana valley, although this is a minor component.

There are twenty alpine summer pastures still active in the valleys, where the renowned Bitto cheese is made. While there are few young people involved in livestock raising and in the dairy industry, in most of the pastures zootechnical and cheese-making practices remain traditional. Cheese-making is often still carried out in *calec*, huts consisting of a perimeter dry-stone wall with a waterproof tarpaulin serving as a roof. These huts are used for a few days, and then the equipment for processing the milk and the tarpaulin are moved to another area. In addition to a herd of dairy cows, almost all the pastures also have a herd of the local Orobic goat, a long-haired breed with equally long spiral horns. These elements are of interest to a cultural-rural tourism and they are actually complemented by the Bitto Centre in Gerola Alta, inaugurated in 2007, four years after the survey, which provides space for maturing the cheeses, and for promotional initiatives and tastings.

### *The Bergamo Valleys*

Two sub-areas were considered: the Taleggio valley, a deep lateral valley on the orographic right side of the Brembana valley, and the Gandino valley, a small lateral valley on the orographic left side of the Seriana valley. The first area, like the second, has a pre-alpine environment; the two municipalities which comprise the area, one of which has less than 900 inhabitants and is spread over an altitude range of between 750 and over 1000 metres, have no industries, a high number of commuters and an economy based on small companies in the service and dairy sectors. The Gandino valley, instead, has been the centre of a textile industry since the middle ages. The main municipality, Gandino, counts around 6,000 inhabitants; the whole valley, which includes five municipalities with settlements at altitudes between 400 and 600 metres, 15,000 inhabitants.

Tourist facilities in the Taleggio valley consist of two hotels; in the district where the alpine summer pastures are located there are two refuges where the interviews were conducted: the Nicola refuge on the Artavaggio plateau (1900 m asl) and the Gherardi refuge on the Alben plateau (1650 m asl). Tourism in the Taleggio valley is mostly for families; one of the hotels has recently styled itself "the health hotel" profiting by the valley's "natural" image. There are many

second homes and these are on the increase. The valley is accessible from the Brembana valley bottom by means of a provincial road which winds up from the village of S. Giovanni Bianco. There is a vast network of footpaths and tracks offering walkers easy trails through a little anthropized countryside. The majority of tourists come from the vast urban sprawls of the Bergamo plain<sup>4</sup> which is connected with the Brianza-north Milan area. There are no winter sports facilities. Following the abandonment of the practice of transhumance of the cattle by the farmers of the plains, the alpine summer pastures, once of considerable importance given the easy access<sup>5</sup> and their favourable position, have suffered from a long period of decline. The number of dairy cattle decreased considerably, replaced in part by dry cattle, while the managers are generally of a more advanced age and there are no agri-tourism activities.

There is just one pension in Gandino and tourism is strictly local, given the intense urbanisation of the Seriano valley bottom and the centres of the valley itself. The area where the survey was carried out is the Farno basin, the location of four alpine summer pastures (Valpiana, Montagnina, Campo d'Avene and Malga Lunga). The area pioneered winter tourism: before the ski-lift to the Farno basin was closed at the end of the Sixties, the ski areas attracted tourists from Bergamo and Milan. The Parafulmine refuge (m. 1500), where the survey was carried out, currently offers a dedicated cross-country skiing circuit of 7.5 kilometres. The restoration of the alpine summer pastures, now in a state of partial abandon and under-used, is part of project to revive tourism in the Farno Basin, promoted by the Comunità Montana (Mountain Community) which is focussing on mountain bike trails and a free-flight school, in addition to the cross-country skiing circuit.

#### *The Bormio area*

The area as a whole has a population of around 11,000 residents. It is a tourist region with 113 hotels (10 of which are 4 or 5 star) and accommodation for 7,043 guests in hotels and other tourist facilities (bed & breakfast, apartments, campsites, etc.). While tourism in the neighbouring district of Livigno draws its clientele from further afield, visitors to the Bormio region are for the most part from the region itself and tourism here is founded on the presence of ancient spas, the exploitation of which, since the first half of the 19<sup>th</sup> century, has been enhanced by the development of modern hotels. The area, which encompasses a large part of the Lombardy section of the Stelvio National Park, regularly holds important international downhill skiing competitions and also has a nine-hole golf course. The historic centre has many monuments and preserves its medieval layout, this being a period when the town enjoyed considerable political autonomy and was also an industrial centre at the cross-roads of important commercial networks.

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<sup>4</sup> The distance from S. Giovanni Bianco to the mouth of the Brembana Valley is only 26 kilometres.

<sup>5</sup> An in-depth analysis of the history and routes of transhumance in the Lombardy Alps can be found in Corti (2004).

Day-trippers are not a significant part of the influx of tourists due not so much to the distance in terms of kilometres from the Lombardy plain, as to the fact that the road winds along the Valtellina Valley bottom, over-burdened with tourist traffic, as well as commercial and local traffic in the absence of alternative routes for large sections of it.

The district has more than 30 alpine summer pastures producing milk, of which 5 offer agri-tourism services: the survey was carried out at one of the latter. Alpine summer pastures are here often carried out by young dairy farmers who have successfully integrated animal husbandry on permanent sites with the practice of taking the herds up to alpine summer pastures, the latter case generally involving making butter, ricotta and cheese from the milk *in situ*. With respect to direct sales of their products, however, not all the pastures can rely on a consistent demand. It was only in 2007 that local Organisations started to promote tourist activities around the alpine summer pastures. The survey was carried out at the Boron Refuge in the Valdidentro, one of the four valleys (along with the Valfurva, the Braulio Valley and the Valdisotto) which have their confluence in the vast Bormio basin.

### *Passo Rolle*

In Trentino the survey was carried out in the Upper Primiero valley, specifically in the area of Passo Rolle, situated in the north-eastern part of the province close to the border with the province of Belluno. The pass is around 2,000 metres above sea level and is just above the village of San Martino di Castrozza, along the road which runs from the Primiero valley to the Fiemme valley. The territory has been an important tourist destination since the second half of the 19<sup>th</sup> century, when the Italian and Austrian Tyrol were at the forefront of the development of the tourist industry in Europe. The construction of the first hotel in San Martino di Castrozza, the idea of an English mountaineer, who had it adapted from an old pilgrims' inn in 1873, is in a way emblematic of processes common to many other places in the region<sup>6</sup>. In the nineteen-sixties the development of winter sports provided a further stimulus to tourism, which gradually replaced agriculture and forestry as the leading local economy. In 2003, when the survey was carried out, 121,000 tourists visited the area, compared with around 10,000 residents in the whole Primiero valley; 50,000 of the visitors came in the months from June to September inclusive. Tourist facilities include 90 hotels, accommodating up to 5,500 guests per day. Accommodation for a further 3,000 is provided by the so-called complementary facilities, while second homes also play an important role in the entire valley. Tourists are mainly Italian, with most coming from the Veneto, Lombardy, Emilia-Romagna and Lazio.

The alpine summer pastures located around Passo Rolle (Fosse, Juribello, Pala, Rolle, Vallazza, Venegia, Venegiota), which lies at the foot of the Pale di San Martino mountain group, cover a total surface area of just over 1,000 hectares of

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<sup>6</sup> For a brief study of the early stages of the development of tourism in the Tyrol area, see Cole (2002).

meadows where a total of around 600 head of dairy cattle graze during the three months of summer. The pasture lands are all located within the perimeter of the Paneveggio-Pale di San Martino Nature Park. Following construction of the Primiero district cheese co-operative, since the early eighties milk has no longer been made into cheese on the pastures, but is brought to the cheese factory immediately after milking, where it is treated separately from milk coming from cows kept in barns. The buildings on the alpine summer pastures are public property, generally belonging to the municipality, and it is the norm for them to provide agri-tourism activities (restaurant) and to sell produce from the district cheese co-operative. The survey was carried out at Malga Juribello, 1,800 m above sea level, which can be reached on foot in just over half an hour along an easy forestry track which is closed to traffic. The pasture has a herd of around 150 head of dairy cattle and, during summer, once a week hosts educational outings for the tourists with demonstrations of cheese-making organised jointly by the Park administration and the Breeders' Federation.

### 3. Socio-demographic profiles of the respondents

The visitors encountered, all resident in Italy, were more than helpful: almost all agreed to take part in the short interview resulting in the compilation of 829 questionnaires. It was subsequently decided to discard the responses from minors under 15 years of age, as well as certain special cases, for example two helicopter pilots who had landed in one of the pastures in the Bergamo valleys and were regularly interviewed by the investigators. A data base of 790 interviews was thus obtained: 162 were carried out in the Bitto valleys, 123 in the Bergamo valleys, 232 in the Bormio area and 273 at Passo Rolle. This is the data base on which the analyses presented hereafter were carried out.

The socio-demographic profiles of the interviewees (sex, age, level of education, characteristics of the place of residence) may be better understood in comparison with those of the population resident in Italy as a whole. Data regarding the Italian population are taken from the last general census of the population resident in Italy, carried out only two years before the investigation (2001). As previously pointed out, the sample cannot claim to be a statistical representation of the phenomenon: nonetheless, comparison with the national data may, in our view, provide interesting indications.

Firstly, it may be observed that while there are a higher number of females (table 1) among the population resident in Italy and over 14 years of age at the time of the last census, males are more numerous among the interviewees, although not by much (55%). The phenomenon is more marked in the Bitto valleys and in the Bergamo valleys; on the other hand, the distribution of interviewees in the Bormio area and in particular at Passo Rolle is, in this respect, more balanced.

The ages of the visitors, duly requested in the questionnaire, were subsequently analysed into groups. Comparison with all residents in Italy (table 2) shows a particularly high frequency in the 35 to 49 age group: four out of ten of the interviewees. On the other hand, the over 65 age group is understandably under-represented (around 5% of the sample against 22% of the census data), while the other age groups are generally in line with the overall population of Italy. Only in the Bitto valley is there a considerably higher percentage of respondents in the twenty to thirty-four age group (40%).

Table 1 - Distribution of the interviewees and of the population resident in Italy (2001) by gender

	Bitto Valleys (SO)	Bergamo Valleys (BG)	Bormio Area (SO)	Passo Rolle (TN)	TOTAL	<i>RESIDENTS IN ITALY &gt; 14 yrs.</i>
Females	37.04% (60)	38.21% (47)	44.59% (103)	48.51% (130)	<b>44.59%</b> (340)	<i>52.01%</i> (25,465,931)
Males	62.96% (102)	61.79% (76)	55.41% (128)	51.49% (138)	<b>55.41%</b> (444)	<i>47.91%</i> (23,426,628)

Table 2 - Distribution of the interviewees and of the population resident in Italy (2001) by age class

	Bitto Valleys (SO)	Bergamo Valleys (BG)	Bormio Area (SO)	Passo Rolle (TN)	TOTAL	RESIDENTS IN ITALY > 14 yrs.
15 - 19	3.70% (6)	2.44% (3)	4.74% (11)	7.35% (20)	5.07% (40)	6.06% (1,445,729)
20 - 34	40.12% (65)	28.46% (35)	17.67% (41)	19.85% (54)	24.71% (195)	24.98% (6,053,751)
35 - 49	38.27% (62)	38.27% (36)	44.83% (104)	41.54% (113)	39.92% (315)	25.42% (6,239,581)
50 - 64	15.43% (25)	15.43% (37)	29.74% (69)	25.74% (70)	25.48% (201)	21.76% (5,466,360)
65 and over	2.47% (4)	9.76% (12)	3.08% (7)	5.51% (15)	4.82% (38)	21.77% (6,260,510)

As is usual when dealing with statistics regarding levels of education (table 3), only individuals over 19 years of age, whether interviewees or the population resident in Italy, were considered. Around a quarter of respondents have a university education while half have a second grade secondary school certificate, much higher on the whole than the percentages found among the population of Italy during the last population census. These figures confirm the relatively high level of education found in much empirical research on both rural tourism and nature tourism in Italy (Osti, 1999; Marangon *et al.*, 2002). The interviewees in the Bergamo valleys, however, differ markedly from this profile, with half of them declaring having been educated only up to the minimum school-leaving age<sup>7</sup>.

Table 3 - Distribution of the interviewees over 19 years of age and of the population resident in Italy (2001) of the same age by level of education

	Bitto Valleys (SO)	Bergamo Valleys (BG)	Bormio Area (SO)	Passo Rolle (TN)	TOTAL	RESIDENTS IN ITALY > 19
First grade secondary school	32.05% (50)	49.15% (58)	16.29% (36)	17.86% (45)	25.30% (189)	59.16% (25,162,807)
Second grade secondary school	46.79% (73)	39.83% (47)	57.01% (126)	51.98% (131)	50.47% (377)	31.33% (13,326,335)
University	21.15% (33)	11.02% (13)	26.70% (59)	30.16% (76)	24.23% (181)	9.50% (4,042,259)

<sup>7</sup> This is interesting in that, according to Osti (1999), the body of data relative to nature tourism tends to play down the differing tendencies and demands of two types of eco-tourist polarised according to their level of education, a parameter couched in economic, generational and, of course, cultural terms.

The place of residence of the respondent was reported analytically (nominally) in the questionnaire, which allowed the information to be transformed, where required, into numerical variables where the number of inhabitants and distance from provincial capital was concerned, or into dichotomous variables, with respect to whether it was a provincial capital or not, and whether located in the same province as where the survey was carried out or in another province. Comparison with the census data was carried out on the basis of size classes, in terms of number of inhabitants. This revealed large differences between the four areas surveyed (table 4): in two of the areas, Bormio and Passo Rolle, there were considerably more visitors from urban centres with at least 100,000 inhabitants, while in the other two areas, the Bitto valleys and the Bergamo valleys, there were relatively more visitors resident in centres with, respectively, between 10,000 and 50,000 inhabitants and with less than 10,000 inhabitants.

Table 4 - Distribution of the interviewees and of the population resident in Italy (2001) by municipality of residence classified according to population size

	Bitto Valleys (SO)	Bergamo Valleys (BG)	Bormio Area (SO)	Passo Rolle (TN)	TOTAL	<i>RESIDENTS IN ITALY</i>
Up to 10,000	31.06% (50)	44.72% (55)	25.43% (59)	21.61% (59)	<b>28.26%</b> (223)	<i>32.69%</i> (18,631,613)
10,001 - 50,000	44.10% (71)	32.52% (40)	28.45% (66)	24.18% (66)	<b>30.80%</b> (243)	<i>33.01%</i> (18,745,510)
50,001 - 100,000	1.86% (3)	1.63% (2)	12.07% (28)	8.79% (24)	<b>7.22%</b> (57)	<i>11.27%</i> (6,390,014)
100,001 - 500,000	8.70% (14)	11.38% (14)	11.64% (27)	33.33% (91)	<b>18.50%</b> (146)	<i>10.91%</i> (6,715,060)
500,001 and above	14.29% (23)	9.76% (12)	22.41% (52)	12.09% (33)	<b>15.21%</b> (120)	<i>12.06%</i> (6,969,807)

Although among the interviewees as a whole there was a relative prevalence of male respondents, of residents of larger towns, of individuals with a high level of education and aged between thirty-five and fifty, the profiles of the interviewees in the various areas were anything but homogeneous.

#### 4. Motivations and attitudes of the “average” visitor

In order to make a better assessment of the potential differences between the four areas surveyed, it is first appropriate to consider the frequencies in the various responses across the whole sample.

Regarding the main reason for the visit, the questionnaire imposed a choice between four alternative statements<sup>8</sup>. The data show that, apart from the 90 visitors who declared they were in the place of the interview “by chance, walking along the footpaths”, the reason most of the respondents gave was expressive, rather than instrumental: “an interesting place to visit” (table 5). Most of the people, therefore, have strong attachments to the alpine summer pastures, as can also be deduced from the more than 70% of respondents who either regularly or often visit similar localities (table 6).

Table 5 - Main reason for the visit

	Scores	Percentages
For a snack/rest during a walk	186	23.58%
By chance, walking along the footpaths	90	11.42%
It’s an interesting place to visit	408	51.68%
With the express intention of having a meal/buying produce	105	13.32%

Table 6 - Frequency of visits to the alpine summer pastures

	Scores	Percentages
Rarely / it’s the first time	224	35.76%
Fairly often	403	51.01%
Very often	163	20.63%

As far as attitudes are concerned (table 7), it emerges primarily that contact with nature and appreciation of the scenery - an aim which could, although at a push, be considered of a relational-expressive type - prevails significantly in importance over that of physical exercise, considerably more instrumental and ego-oriented. The mean value attributed to the importance of contact with nature and enjoyment of the mountain scenery which the visit to the alpine summer pasture provides, in fact equals 5, the maximum value possible, while lesser importance, a mean of 4, is given to physical exercise. Regarding the importance given to the various aspects of the alpine summer pasture, the mean rating is 4 (“very much”) for all six items in the questionnaire. At first sight, the

<sup>8</sup> As with the other questions in this format, the alternative statements from which the interviewees had to make a choice were formulated definitively after the questionnaire had been tested in the same conditions in which the survey would be carried out.

distribution of the responses does not, therefore, present a wide variation in evaluation. This is due in part to the structure of the evaluation grids which tend to favour, in the unnatural and hurried interview situation, undifferentiated attribution of a high degree of agreement. However, examination of the percentage of responses which gave an evaluation above the mean, shows that there is stronger agreement with respect to cultural aspects - that is, the importance of the alpine summer pastures in conserving the cultural heritage and quality of the countryside - than with respect to functional aspects, particularly those regarding productivity. As for the importance of the "production of milk, cheese and butter of particular quality", a rating above the mean was given by "only" 28% of the interviewees (40-42% in the case of cultural aspects and the scenery). These results do not, therefore, seem to support the image of the tourist as represented by current advertising, which instead emphasises, when non explicitly promoting, the consumerist intent found in many new forms of tourism, especially that oriented towards food and wine.

Table 7 - Scores (from 1 = not at all to 5 = very much) assigned to the various items presented

	Mean	% responses > mean
How important are the following reasons for your walk today?		
To take part in a healthy physical activity	4	35.76%
To enjoy contact with the natural environment	5	-
To admire the typical mountain scenery	5	-
In general, how important are the following aspects of the alpine summer pastures to you?		
Harmony of architecture and landscape	4	40.33%
The production of milk, cheese and butter of particular quality	4	28.22%
The traditions that they represent and keep alive	4	42.24%
The effects on the livestock's well-being	4	36.94%
Their role in the prevention of natural disasters (fires, erosion)	4	35.82%
The presence of grass, flowers and butterflies ...	4	38.48%
With respect to the grazing animals, to what extent do you agree with the following statements?		
They give a sense of peace and tranquillity	4	43.65%
They are an integral part of the alpine landscape	5	-
It's important that children see them and get to know them	5	-
It's good that they can graze freely in the open air	5	-
Grazing keeps the pasture free from shrubs	4	47.17%

Certain items refer to the grazing animals. For three of these items, those giving priority to animal welfare, the contribution they make to the classic image of

the alpine landscape and the need to overcome the barrier between naturalness and artificiality imposed on younger generations by their urban way of life, the mean scores are also the highest ones possible. Ethical, aesthetic and pedagogic sensibilities are woven together here, and may be grounded in changes in value orientations - from materialistic to post-materialistic - which, according to the large-scale investigation carried out by Inglehart (1977, 1990), our affluent societies are experiencing. With respect to the other two stimulus-statements regarding the animals, however, the mean value equals 4, although between 40% and 50% of responses give the maximum score. If this doesn't entirely fit the "semi-religious respect for the animals which live (on the alpine summer pastures)" as Kezich (2004) writes, it isn't far short.

The view which emerges from the sample concerning the relationship between pastoralism and tourism (table 8) appears to go against current representations. While the stereotypical image that is being formed is one of tourism as a sort of panacea for all the problems pertaining to agriculture in the mountains, the prevailing opinion among the interviewees is that tourism shouldn't interfere too much with traditional zotechnical practices, even less that the mountain pastures and associated structures should defer to the demands of tourism. Here we are probably up against a bucolic vision of livestock raising, which is not fully cognisant of the difficulties and growing costs to which this productive activity is subject, but the datum is still meaningful in the context of the search for a better balance between the various demands.

Table 8 - Responses to questions on the relationship between the alpine summer pastures and tourism

	Scores	Percentages
Which of the following statements is closest to your way of thinking?		
The main role of the alpine summer pastures should be to encourage tourism in the mountains	122	15.46%
The alpine summer pastures should take advantage of tourism to subsidise costs and supplement income from animal husbandry	172	21.80%
The alpine summer pastures should stay as they were as far as possible, and not be spoilt by tourism	495	62.74%
What do the alpine summer pastures most need to improve their ability to attract tourists?		
Accommodation for visitors	93	11.86%
Availability of refreshments	131	16.71%
Sales point for produce	65	8.29%
Demonstrations (e.g., cheese-making), tastings and guided tours	495	63.14%

Confirmation of this last point comes from the distribution of opinions on the infrastructures which the alpine summer pastures need to improve their ability to attract tourists. Here again we find ourselves looking at responses which are at odds with the cliché tourist, greatly concerned with culinary issues, the object of continual propaganda in recent years on the part of the media. By far the most common response, in fact, is that which places greatest importance on the educational-demonstrational function, while the other three responses put together come to less than 40% of the total.

## 5. Differences between the responses recorded in the four areas

As has already been seen, the socio-demographic characteristics of the individuals who visit the different areas vary at least in part. To assess whether this corresponds to different motivations and attitudes, the data regarding the parameters presented in the preceding section were compared separately for each survey area. In order to assess whether the differences in the distribution of the data are negligible, and therefore probably just due to chance, we made use of statistical tests which are widely used in these cases: Chi-square, when a choice had to be made between alternative statements, the Kruskal Wallis test when interviewees were asked to assign a score according to the importance of the stimulus-statements or the degree of agreement with them. With respect to the differences in the distribution theoretically predicted by the hypothesis that the various sub-groups belong to an identical population, the tests assign a probability to the possibility that these are due to chance: the lower this probability, the more we can trust the differences our data record. By convention, when this probability is lower than 0.05 (5%) the differences can be said to be statistically significant. As we do not intend to draw statistical inferences from our work, where the tests assign percentages higher than the conventional threshold of 5% to the differences, the approximate value will also be considered.

It should be pointed out that, as expected, the differences between the four areas with respect to the main reason for the visit (table 9) are marked and are statistically significant<sup>9</sup>. More specifically, in the Bitto valleys there is greater emphasis on the statement "an interesting place to visit", while in the Bormio area and the Passo Rolle area the reason "specifically to eat/to buy produce" is selected twice, if not three times, as often as in the other two areas. It is clear, in this respect, that the varying services offered have an influence on the reason for the visit, even if expressive types of motivation remain, in any case, the prevalent ones.

Table 9 - Main reason for the visit in the four areas surveyed

	Bitto Valleys (SO)	Bergamo Valleys	Bormio Area (SO)	Passo Rolle (TN)	P*
for a snack/rest during a walk	15.53% (25)	29.27% (36)	25.86% (60)	23.81% (65)	.0001
by chance, walking along the footpaths	17.39% (28)	11.38% (14)	11.64% (27)	7.69% (21)	
it's an interesting place to visit	60.87% (98)	52.03% (64)	47.41% (110)	49.82% (136)	
having a meal/buying produce	6.21% (10)	7.32% (9)	15.09% (35)	18.68% (52)	

\* Chi-square

<sup>9</sup> This is analogous with other investigations in which different trails in a National Park appeared to attract different types of hikers (Fariás Torbidoni *et al.*, 2005).

There also appear to be appreciable differences between the groups of visitors interviewed in the various areas with respect to their behaviour in terms of the frequency of visits to the alpine summer pastures (table 10). In the Bitto valleys a greater number of casual visitors are recorded, while in the Bergamo valleys there are a greater number of regular visitors. On the contrary in the Bormio area and in Passo Rolle visitors group together with respect to this parameter and are characterised by a higher proportion of respondents who visit the alpine summer pastures “fairly often”.

Table 10 - Frequency of visits to the alpine summer pastures in the four areas surveyed

	Bitto Valleys (SO)	Bergamo Valleys	Bormio Area (SO)	Passo Rolle (TN)	p*
Rarely / it's the first time	38.89% (63)	27.64% (34)	30.60% (71)	20.51% (56)	.0000
Fairly often	38.89% (63)	39.02% (48)	51.28% (119)	63.37% (173)	
Very often	22.22% (36)	33.33% (41)	18.10% (42)	16.12% (44)	

\* Chi-square

Attitudes measured by scores assigned on the basis of a Likert scale (table 11) primarily show statistically significant differences in the roles of physical activity and of contact with the natural environment in an excursion to an alpine summer pasture. With respect to the first item, relatively higher scores are given by visitors in the Bergamo valleys, while in the second case it is the visitors to the Bormio area and the Bitto valleys who stand out from the rest. Regarding the importance given to “typical mountain scenery” the differences are not statistically significant, merely indicative: in any case, it is the interviewees in the Bormio area who give relatively higher scores to this statement.

Furthermore, when it comes to the importance given to the various features of the alpine summer pastures, statistically significant differences are reported with respect to:

- “the harmony between architecture and landscape”, where, consistent with what has been observed in the above paragraph, it is the tourists in the Bormio area who, on average, assign this the higher rankings;
- “the traditions that (the alpine summer pasture) represents and keeps alive”, the statement which receives the most favourable responses in the Bitto valleys followed by the Bormio area;
- “the presence of grass, flowers and butterflies”, which gives rise to a rather sharp distinction between those interviewed in the Trentino survey area, who

are more cautious, and in the Lombardy survey areas, more assertive, in particular in the Bergamo valleys. This zone, perhaps due to its function as green lung to the large urban and industrial centres of the nearby Lombardy plain, seems to attract visitors who are more sensitive to statements regarding values associated with nature.

Table 11 - Mean ranks (from 1 = not at all to 5 =very much) assigned to various items in the four areas surveyed

	Bitto Valleys (SO)	Bergamo Valleys	Bormio Area (SO)	Passo Rolle (TN)	p*
How important are the following reasons for your walk today?					
to take part in a healthy physical activity	365.91	451.72	416.37	359.28	.0001
to enjoy contact with the natural environment	400.54	394.93	419.46	363.57	.0141
to admire the typical mountain scenery	371.93	399.01	415.53	389.39	.1234
In general, how important are the following aspects of the alpine summer pastures to you?					
Harmony of architecture and landscape	380.94	396.26	425.12	365.46	.0174
The production of milk, cheese and butter of particular quality	398.74	381.88	376.03	406.25	.4262
The traditions that they represent and keep alive	419.21	355.30	408.33	383.05	.0454
The effects on the livestock's well-being	359.90	406.04	398.65	390.50	.2342
Their role in the prevention of natural disasters (fires, erosion)	387.79	421.26	398.88	364.88	.0850
The presence of grass, flowers and butterflies ...	417.13	436.54	411.34	331.27	.0000
With respect to the grazing animals, to what extent do you agree with the following statements?					
They give a sense of peace and tranquillity	368.30	403.96	410.17	379.54	.1730
They are an integral part of the alpine landscape	381.46	389.11	414.85	387.42	.3151
It's important that children see them and get to know them	383.90	410.82	381.21	391.57	.5617
It's good that they can graze freely in the open air	392.66	389.13	377.94	403.39	.4615
Grazing keeps the pasture free from shrubs	414.75	428.85	382.30	362.58	.0097

\* Chi-square

Further differences, albeit to unappreciable degrees according to statistical conventions, are found with respect to:

- “the production of milk, cheese and butter of particular quality”, which gets a higher ranking on average from interviewees around Passo Rolle, an area where dairy produce from the district cheese factory has been on sale at the alpine summer pastures for some time. This result leads us to suppose that appreciation, and before that, knowledge, of these aspects is the result of learning processes which may be influenced to a greater or lesser degree by the strategies that pastoralists adopt,
- “the effects on the livestock’s well-being” and “their role in the prevention of natural disasters (fires, erosion)” with rankings on average higher amongst the interviewees in the Bergamo valleys, who again in this case assign positive values to the alpine environment.

Table 12 - Responses to questions on the relationship between the alpine summer pastures and tourism in the four areas surveyed

	Bitto Valleys (SO)	Bergamo Valleys	Bormio Area (SO)	Passo Rolle (TN)	p*
<b>Which of the following statements is closest to your way of thinking?</b>					
The main role of the alpine summer pastures should be to encourage tourism in the mountains	14.20% (23)	19.51% (24)	12.21% (28)	17.22% (47)	.0477
The alpine summer pastures should take advantage of tourism to subsidise costs and supplement income from animal husbandry	20.99% (34)	12.20% (15)	26.84% (62)	22.34% (61)	
The alpine summer pastures should stay as they were as far as possible, and not be spoilt by tourism	64.81% (105)	68.29% (84)	61.04% (141)	60.44% (165)	
<b>What do the alpine summer pastures most need to improve their ability to attract tourists?</b>					
Accommodation for visitors	12.58% (20)	11.38% (14)	8.66% (20)	14.39% (39)	.0000
Availability of refreshments	5.66% (68)	13.01% (16)	29.44% (68)	14.02% (38)	
Sales point for produce	7.55% (16)	9.76% (12)	6.93% (16)	9.23% (25)	
Demonstrations (e.g., cheese-making), tastings and guided tours	74.21% (118)	65.85% (81)	54.98% (127)	62.36% (169)	

\* Chi-square

Amongst the items concerning the grazing animals, statistically significant differences are recorded in only one case, "grazing keeps the pasture free from shrubs and tall grasses", which gets a higher ranking on average in the Bergamo valleys firstly, and then in the Bitto valleys. As far as the scores assigned to "give a sense of peace and tranquillity" and "they are an integral part of the alpine landscape", the results seem to confirm, although without the support of statistical significance, attention to the aesthetic-scenic aspects previously found with interviewees in the Bormio area. With respect to the small differences in the scores assigned to "it's important that children see them and get to know them" and "it's good that they can graze freely in the open air", it is difficult to escape from the hypothesis that there is substantial agreement on these items in the various areas.

Finally, it is worth mentioning the differences, all statistically significant, resulting from the questions aimed at eliciting opinions on the relationship between the alpine summer pastures and tourism (table 12). In the two areas where visits tend to be day-trips, especially in the Bergamo valleys, choices are particularly focused on the opinion that the alpine summer pastures should remain how they were in the past, places where traditional, well-balanced zotechnical practices are carried out. On the other hand, in the two areas characterised by permanent and more long-standing tourism, in particular in the Bormio area, the wish is expressed relatively more often that the alpine summer pastures take advantage of tourism to guarantee better economic returns for zotechnical activities. As for what the alpine summer pastures most need to improve their ability to attract tourists, the interviewees in the Bormio area stand out for the unusual frequency with which they indicate availability of refreshments. This is chosen over demonstration activities, which nonetheless remains the most frequently chosen option in all the areas.

## 6. Concluding remarks

Amongst the tendencies which emerge from the results presented above, it should first of all be pointed out that the profile drawn by the descriptive statistical analysis is, unexpectedly, of the average visitor who assigns greater importance to environmental and cultural aspects than to functional aspects, in particular productive value. Visiting the alpine summer pastures is, therefore, for most people visiting “an interesting place”, an experience where contact with the “natural” environment and enjoyment of the mountain scenery are central. More specifically, the alpine summer pastures should continue to be what they were in the past, places where well-balanced zotechnical practices are carried out, places which humanise the landscape without allowing production or tourism to damage it. If, on the one hand, the prevailing attitudes in our sample are consistent with the idea of the tourist as care-taker of the rural way of life, which underlies much of current European Union policy on this issue [Nilsson, 2002], on the other hand, it may be said that they barely conform with models of rural tourism currently in vogue, which tend to promote auxiliary services aimed at gastronomy, fitness or well-being. Considerable importance, on the other hand, is given to the animals; to their symbolic role, “they are an integral part of the alpine landscape”; to their educational value, a means by which the younger generations may get first hand experience of the methods of production and professions, the practices and significance of which might otherwise risk being lost, “it is important that children see them and get to know them”; to the alpine summer pastures as places where a different and more respectful relationship exists between humans and animals, “it is good they can graze freely and in the open air”. A bucolic image, if you like, probably largely ignorant of the problems which afflict livestock raising in the mountains<sup>10</sup>, trapped between the ever more stringent demands of commercial competitiveness and, on the other hand, penalised by the scant social acknowledgement of the professionals involved in it. A vision which, from the point of view of its critics, may be due to an urban-tertiary way of thinking which tends to crystallise the rural space and reduce it to a mere aesthetic-recreational function [Willits & Luloff, 1995], but which, in our view, may instead be interpreted in terms of positive values, adherence to principles of naturalness and sustainability, which today take priority.

There are conspicuous differences amongst the interviewees in the various survey areas. These differences are encountered, firstly, in the socio-demographic characteristics of the various sub-groups. The two localities situated in the districts with developed and more well-established traditions of tourism, incidentally those where more than two hundred interviews were conducted without difficulty, we recorded a more balanced distribution of males and females, a higher level of education and more residents of larger municipalities. The marginal areas with respect to large influxes of tourists, characterised by fewer visitors, instead share higher percentages of male visitors and residents of

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<sup>10</sup> A view which in any case seems to also characterise residents of mountain areas not directly involved in agro-zotechnical practices (De Ros & Fusani, 2005).

smaller municipalities, and in one of these there were a particularly high number of people with only a first grade secondary school certificate.

Aside from this, different alpine summer pastures seem to attract visitors with different motivations and attitudes. In the two survey areas with better and more tourist facilities, for example, the number of interviewees who declared their visit to be of an instrumental type (“with the express intention of having a meal/buying produce” or “for a snack/for a rest during a walk”) is close to that of respondents declaring themselves to be in the place of interview because “it is an interesting place to visit”, a view highly prevalent in the other two localities. It is worth highlighting the consistency with which interviewees in the Upper Valtellina area react positively to stimulus-statements which refer to the merits of the scenery. The interviewees in the two areas which are easily accessed from the urban centres of the Lombardy plain are instead relatively more generous in the scores they assign to the cultural aspects, particularly the “educated” visitors in the Bitto valleys, and to the environmental aspects of the alpine summer pastures, especially the “working class” day-trippers in the Bergamo valleys. Finally, it would be worth studying in greater depth the picture which emerges from the Trentino survey area, where there has been greater investment in produce and where reactions to the importance of the animal and dairy products of the alpine summer pastures were relatively more positive.

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