Visitor Interests towards Bird Habitats seen as Virtual Landscapes

A Photo & Sound Based Experiment

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August 2012

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Abstract

The MSc thesis has aimed to establish a new categorization of visitor motivations from the aspect of visitor interests' direction. Besides, it has aimed to disperse the confusion of the research field of motivation and to synthesize the existing motivations which can be related to bird habitats seen as virtual landscapes, and towards birds. The questionnaire based interview is applied as an experiment involving 30 test subjects. The established visitor interests are based on the direction of visitor motivations which are the following; general interest, relaxation-, recreation-, amazement seeking interest, creativity interest, learning seeking interest, scientific interest, economic interest, and other interest. The ANOVA Single Factor analysis giving the statistical basis is underpinned by the abstract categorization called Exist/Not Exist/Cannot be Judged. When the visitor interests are related to the certain area as a whole, the visitor interests can be ranked based on their percentages. The recreation seeking interest is 97%, the relaxation seeking interest is 90%, the general interest is 83%, the learning seeking interest is 73%, while the economic interest is 63%, the amazement seeking interest is 57%, the scientific interest is 53%, and the creativity interest is 37% towards the certain area. But based on the abstract categorization, the creativity interest does not exist towards the certain area, since it is less than 50%.

Keywords: bird habitat, virtual landscape, birds, motivation, visitor interests' direction, experience seeking.

Summary

The MSc thesis has established a new categorization of visitor motivations by gathering the existing motivation categories, and establishing new ones as well under the "umbrella" of visitor interests' direction. It has been done in order to disperse the confusion of this research field and to synthesize the visitor motivations. This has been done related to the bird habitats which are seen as virtual landscapes, including birds as well. Altogether 9 visitor interests have been established according to their direction such as general interest, recreation-, amazement-, learning seeking interest, scientific-, creativity-, economic-, and other interest. To the newly created visitor interests, indicators have been attached in question format. In the experiment with the questionnaire based interviews, the test subjects only had to say "Yes" or "No" for the questions which have simplified to draw conclusion about that the test subjects do have the visitor interests towards bird habitats seen as virtual landscapes, including birds or not. The test subjects have watched a power point presentation about the certain area's bird habitats seen as virtual landscapes and have listened to bird songs. The result is based on the answers of 30 test subjects constructing the sample. They have been chosen by screening questions from the population.

The dataset has been analysed by (1.) using the ANOVA Single Factor which has helped to point out the most important visitor interest – when it is applicable - related to the bird habitats seen as virtual landscapes of the certain area. The most important bird habitat seen as virtual landscape based on each visitor interest have been also pointed out, but it does have only concerning the general-, relaxation seeking-, and recreation seeking interest based on the P-value. Besides, (2.) an abstract categorization has been also used which have pointed out that amazement seeking-, creativity-, and scientific interest do not exist towards the certain area seen as a whole because their percentage is less than 50%. Column diagrams (3.) have been also used which is based on the ANOVA-tables. The recreation seeking interest is 97%, the relaxation seeking interest is 90%, the general interest is 83%, the learning seeking interest is 73%, while the economic interest is 63%, the amazement seeking interest is 57%, the scientific interest is 53%, and the creativity interest is 37% towards the certain area. Concerning general interest, relaxation-, and recreation seeking interest, there is most important bird habitat seen as virtual landscape in the certain area, but since related to the other 6 visitor interests there is no most important one, therefore all are related to the certain area for simplification. When the visitor interests have been ranked based on each bird habitat of the certain area, then most important visitor interest have been always pointed out based on the P-value of ANOVA-tables. This is 5 times the relaxation seeking interest (Black Woodpecker-, Kingfisher-, Nightjar-, Woodlark-, Tawny Pipit bird habitat), and 5 times the recreation seeking interest (Wryneck-, Honey Buzzard-, Stonechat-, Red-backed Shrike-, and Wheatear bird habitat of the certain area). The comment of Pearce (1993a) has been proved which has been presented by Hall and Page (2006: 73) saying that there is perpahs one motivation which is dominant at once. The name of the certain area has been hidden in the MSc thesis, exception is the conclusion.

1. Introduction

The overall purpose of the MSc thesis is to examine the visitor motivations from the aspect of visitor interests' direction towards bird habitats seen as virtual landscapes related to the certain area, but visitor interests towards birds are also included. This is a newly established aspect of visitor motivations which gathers existing motivation categories under the "umbrella" of visitor interests' direction. This approach would like to disperse the confusion on the research field of the visitor motivations. In the MSc thesis, the visitor interests' direction is the pull factor which attracts visitors to the certain area. This is different approach compared to the existing ones, since not the bird habitats and their birds attract the visitors, but the visitor interests according to their direction. This is the pull factor, also called attracting power. Altogether 9 visitor interests have been established according to their direction (see in *Italics* below) which are represented by the sub-research questions (1-9). In most of the cases, they are built upon the literature findings. Mode of rapture of Lengkeek (2001) is the basis for the *amazement seeking interest*, mode of mastering (Lengkeek, 2001) is the foundation of the *scientific interest*, while the mode of interest according to Lengkeek (2001) established the root of the *learning seeking interest*. The mode of amusement based on Lengkeek (2001) defines the origin of the *recreation seeking interest*, while the art related interest discussed by Kelly and Nankervis (2001: 59) gives the basis for the *creativity interest*. Diversionary mode of Cohen (1979) in Lengkeek (2001) underpins the *relaxation seeking interest*, while the "Attraction of Living" (Nelson et al., 2004) supports the *general Interest* related to the visitor interests' direction aspect of visitor motivations. Willingness-to-earn money has established the foundation of *economic interest*, while the *other interest* is created by such motivations which do not fit into another categories. The sub-chapter 3.1.4. shows the indicators which have been established in question formats and assigned to the appropriate visitor interests according to their direction. Questions in the research instrument help to find out that the test subjects do have a specific visitor interest or do not have towards bird habitats seen as virtual landscapes, including visitor interests towards birds. But first of all, background knowledge is given leading to the problem statement.

1.1. Background

When something can be substituted by the phrase "in order to" that is the "language" of motivation (De Sola Pool *et al.*, 1956: 161 in Dann, 1981). Motivation and purpose many times are used as synonyms (Cohen, 1974: 530 in Dann, 1981). In the motivation studies, lot of them are based on Dann (1977), Crompton (1979), and Iso-Ahola (1980). It is a highly researched area according to Van Marwijk (2009: 50). There are many different categorizations of motivation for example by Iso-Ahola (1982) who constructed a socio-psychological model for visitor motivations. This is

based on two motivational forces such as seeking and escaping which can also be expressed as pull and push factors. These also complement each other. The MSc thesis only deals with the seeking motivational force (pull factor). A visitor can seek personal rewards such as studying certain things about something, taking rest, being recharged (Iso-Ahola, 1982 in Van Marwijk, 2009: 50). Unlike Crompton, Dann – as Van Marwijk (2009: 50) states – Iso-Ahola (1982: 260) does not make difference between push and pull factors. The MSc thesis only deals with the seeking motivational force, to which the questions of Bodnár (2010) can be related who asks where visitors go and why do visitors go there. For example, in the context of the MSc thesis, the site is the certain area, but within that area, a visitor perhaps would like to walk in a forest or in a heathland or at a pond which are bird habitats seen as virtual landscapes. However, the visitor might not think about the area (or does not conceptualize it in his/her mind) as bird habitat when s(he) goes for a walk. Maybe s(he) considers it only as nature area or scenery. Since these are bird habitats, therefore the visitor interests towards birds are indirectly related to the bird habitats. But it also can be imagined that a visitor would like to be in the presence of birds which are singing, fledging, feeding Etc. when s(he) goes to a forest, or a heathland Etc.

Most of the discussions aroused concerning visitor motivations related to push and pull factors. The MSc thesis only deals with pull factors which are motivations (reasons, causes, purposes) aroused by the site according to Crompton (1979). The cultural category of Crompton (1979) being pull factor contains education and novelty. Let us take an example and think about educational interest towards a certain forest or towards newly born chicks which are also were born in the same forest mentioned above. The push factors explain the wish to go to a site, but not knowing to which one. Pull factors explain the choice of the site (Van Aalten, 2010: 20, Crompton, 1979).

The link between the above discussed categories (Crompton, 1979 and Iso-Ahola) is the "socio-psychological" phrase, but still there is difference (see Table 1). On one hand, Crompton (1979) refers only to the push factors as "socio-psychological" factors, but this does not belong to the MSc thesis. On the other hand, Crompton (1979) mentions pull factors too, but not as socio-psychological factors. Iso-Ahola (1980) refers to "socio-psychological" factors as a model which is a common name both for seeking and escaping (Hall and Page, 2006). Crompton (1979) discusses separately about push- (socio-psychological-) and pull factors. Iso-Ahola (1980) discusses about escaping and seeking related to visitor motivations, but calls both of them as socio-psychological factors (Hall and Page, 2006). I argue that their view contradict with each other, therefore better to not use the socio-psychological factor as a name.

Table 1: Authors and the Usage of Push and Pull Factors

Motivations	Crompton (1979)	Iso-Ahola (1980) in Hall and Page (2006)
Push	X (push factors - socio-psychological factors)	X (escaping, socio-psychological factors)
Pull	*X (pull factors)*	*X (seeking, socio-psychological factors)*

Table 1 above shows the different concepts and approaches related to the push and pull factors. For more decades, push and pull factors have been the basis of visitor behaviour research (Baloglue and Uysal, 1996 in Pesonen et al., 2011). The MSc thesis deals only with the row at the bottom of the Table 1 considering only those concepts which are marked with *Italic*, but approaches it from the newly established aspect such as visitor interests' direction.

1.2. Problem Statement

Cooper *et al.* (1993: 23) reveal that visitor motivation literature is still underdeveloped and problems do exist concerning determining visitor motivations such as:

- Motivations for visiting a site can be linked together in an inextricable way and can be multiple (Cooper *et al.*, 1993: 23 in Hall and Page, 2006: 72), but Pearce (1993a) commented also that one motivation is likely to be dominant at one time (Hall and Page, 2006: 73).
- Motivations for visiting a site may contradict with each other - push and pull factors - as well as may change with time (Cooper *et al.*, 1993: 23 in Hall and Page, 2006: 72). But time dimension of motivations is not researched in the MSc thesis because of time limitation.
- The research outcome of the studies which deal with push and pull factors are very much visited site-specific (Pesonen and Komppula *et al.*, 2011).
- Consumer scholars have dealt with experiences which are acquired by consumers, but they rarely focus on experience seeking as an overall phenomenon (Hirschman, 1984).

The problem is strengthened by the confusion related to the field of motivation research. Therefore there is an urgent need to identify visitor motivations from a new aspect of categorization.

1.3. Purpose of the Research

Fodor (2007) states there is sharp competition on the market of visiting the attractions, therefore it is important to have better understanding about visitors' motivation (Bodnár, 2010). The study of visiting the attractions is not fruitful, but it is

sterile without examining the visitor motivations. This statement is built upon the result of literature perusal by studying the work of authors like Buck, Cohen, Crompton, De Sola Pool, Gray, MacCannell, Rivers, and Sutton (Nash *et al.*, 1981). The name of the certain area is hidden in the MSc thesis' every part, except the conclusion where it becomes unhidden. By doing so, it will be possible to tell based on showing photos (see Appendix 1) why visitors would like to go to that certain area to which the photos belong. The expected outcome of the MSc thesis will be the visitor interests' direction towards the certain area's bird habitats seen as virtual landscapes, including visitor interests towards birds.

The gathered knowledge will fill up a knowledge gap related to motivation research as well as help to define rules of thumbs which will be applicable also in other similar sites to which the certain area belongs. This could be applied in and outside the Netherlands. The result will contribute to the work of people who are involved in visitor management of the certain area. Besides, the MSc thesis would like to add to the scientific debate on visiting the attractions. It aims to establish such a categorization of motivations which helps to gather existing motivation categorizes and synchronize them under the "umbrella" of visitor interests according to their direction. By doing so, it is possible to disperse the confusion of this research field.

Since this research has not yet been done, therefore it is exploratory. It uses innovative approach which is a kind of experiment with power point presentation of 10 bird habitats of the certain area which are seen as virtual landscapes. This presentation is supported by different types of bird songs as well. The MSc thesis uses existing motivation categories, but establishes new ones as well by a new approach in order to synchronize the related research findings.

1.4.   Research Questions

What kind of visitor interests do exist according to their direction related to bird habitats seen as virtual landscapes, and related to birds among the test subjects which would attract them as visitors to the certain area, and how common they are?

It is important to reveal that in the beginning, there has been two sub-research questions (A, B) such as:

- Sub-Research Question (A): How common are the visitor interests according to their direction towards bird habitats seen as virtual landscapes among the test subjects which would attract them as visitors to the certain area?
- Sub-Research Question (B): How common are the defined visitor interests according to their direction towards birds among the test subjects which would attract them as visitors to the certain area?

But in the time of proposal presentation the sub-research questions (A, B) have been modified content wisely and have become the following sub-research question (1-9):

1. How common is the mode of rapture of Lengkeek (2001) towards bird habitats seen as virtual landscapes and towards birds among the test subjects which would attract them as visitors to the certain area?
2. How common is the mode of mastering of Lengkeek (2001) towards bird habitats seen as virtual landscapes and towards birds among the test subjects which would attract them as visitors to the certain area?
3. How common is the mode of interest of Lengkeek (2001) towards bird habitats seen as virtual landscapes and towards birds among the test subjects which would attract them as visitors to the certain area?
4. How common is the art related interest based on Kelly and Nankervis (2001: 59) towards bird habitats seen as virtual landscapes and towards birds among the test subjects which would attract them as visitors to the certain area?
5. How common is the diversionary mode of Cohen (1979) towards bird habitats seen as virtual landscapes and towards birds among the test subjects which would attract them as visitors to the certain area?
6. How common is the amusement mode of Lengkeek (2001) towards bird habitats seen as virtual landscapes and towards birds among the test subjects which would attract them as visitors to the certain area?
7. How common is the "attraction of living" (Nelson *et al.*, 2004) towards bird habitats seen as virtual landscapes and towards birds among the test subjects which would attract them as visitors to the certain area?
8. How common is the willingness-to-earn money related to bird habitats seen as virtual landscapes and related to birds among the test subjects which would attract them as visitors to the certain area?
9. How common is the category of other interest towards bird habitats seen as virtual landscapes and towards birds among the test subjects which would attract them as visitors to the certain area?

The proposal which has been submitted in PDF format consists of two sub-research questions, as well as 9 new ones. It has been done unconsciously, but finally has large meaning. The reason is that the MSc thesis' result chapter has been almost finished before the proposal presentation, but in order to include the latest advices in order to have sharp research questions in the proposal, therefore modification has been made based on the literature. Therefore, the result chapter of the MSc thesis (except the conclusion of findings) is organized according to the former situation regarding the sub-research questions and thus based on 2 sub-research questions – A and B. The conclusion of the findings, the discussion and conclusion section are organized according to the latter situation lead by 9 sub-research questions. Behind each newly derived sub-research question, there is a visitor interest according to the newly

established categorization called visitor interests' direction. This is explained in the sub-chapter 4.4. which is about the conclusion of the findings.

1.5. Structure of the MSc Thesis

After the introduction, the theoretical framework (Chapter 2) gives the outline of the most important findings related to motivation literature, but specifically towards bird habitats. Chapter 3 describes the methods which are used in the experiment. Then Chapter 4 is about the results which are discussed in Chapter 5 thereby referring to the scientific knowledge summarized in the theoretical framework. The MSc thesis ends with the conclusions (Chapter 6).

2. Literature Review

This chapter of the MSc thesis would like to introduce to the reader the most important theoretical findings related to the visitor motivations before presenting the conceptual map. Within this chapter different concepts and approaches are presented related to visitor motivations. It is important to clarify that in the conceptualization of the MSc thesis, visitor interests' direction refers to motivations, pull factors, seeking, experience seeking, visitors' aim, as well as to reason of site visiting and pulling power too. According to Turner and Ash (1975) in Dann (1981) pull and push factors sometimes are confused and both handled as motivations, but the Pacific Travel Area Association (1967) identifies only the pull factors as motivations (Dann, 1981). This last aspect represents the best the perspective of the MSc thesis in which *visitor interests' direction* towards bird habitats seen as virtual landscapes, and visitor interests towards birds *attract visitors* to the certain area. This is parallel with the statement of Prentice *et al.* (1998) who mention interest as motivation to visit a place.

Brooks *et al.* (2004) argue that the U.S. national parks show that people put wildlife viewing into the first place as motivation for their attendance at these places (Manfredo, 2008: 3). Turnhout *et al.* (2004) also mentions nature which itself is visited for many purposes such as recreational purpose, study purpose, inspirational purpose as well as exploitation- or cultivation purpose (Turnhout *et al.*, 2004). Laiolo (2004) asserts further that biodiversity attracts visitors, but attracts economical interest as well during its preservation. Lew (1987: 554) summarized the approaches related to the categorization of attractions according to the current literature on visiting the attraction such as ideographic perspective, organizational perspective, and cognitive perspective (Leiper, 1990: 369). From the three approaches, the cognitive perspective can be related to the MSc thesis. This cognitive approach refers to the categorization of attractions according to visitor experiences (Lew, 1987: 560 in Leiper, 1990: 369). There are several key terms concerning "attraction" which refer to it such as "attract", "magnetism", "pull factor", "gravitational influence", "draw" (in the definition of Lew). These terms all refer to the influential impact of attraction as object which can affect behaviour (Leiper, 1990: 369). Gunn states that attractions are magnetic which means it is necessary to have the power with which they can draw visitors who can enjoy their values. Otherwise, without having the drawing power things cannot be considered as attractions (Gunn, 1972: 37 in Leiper, 1990: 369). According to Lundberg's definition visitor attraction can be anything which have the ability for attracting visitors (1985: 33 in Leiper, 1990: 369). This definition fits into the aspect of the MSc thesis in which visitor interests according to their direction are considered to attract the visitors to the certain area. In the current chapter, the reader gets an overview about what the literature says about visitor motivations towards attractions

such as bird habitats seen as virtual landscapes, and towards birds. But firstly, the main concepts are presented.

2.1. Concepts

2.1.1. Visitor

Kelly and Nankervis (2002) take an approach which says that the word 'visitor' contains every people who live somewhere else than the visited area, but still they are present temporarily for the reason of leisure or business. Tourists are also included in the word 'visitor', but local people who host them do not included. This host community does encompass people who live at the area permanently or long term (Kelly and Nankervis, 2002: 12). The approach of the MSc thesis differs from this conceptualization, since it considers also the local residents as visitors. Therefore, the MSc thesis entirely applies the conceptualization of Swarbrooke (2002) who stresses that the word 'visitor' is used to refer to every visitor starting from local residents ending to foreign tourists. Besides, it covers both those people who are on excursion, and also those who are on a day trip, as well as those who stay longer (Swarbrooke, 2002: 5).

2.1.2. Bird Habitats

The visitors might consider the area just as an area with nice flora, nature, wildlife or biodiversity Etc. instead of considering it as bird habitat. According to Pouwels *et al.* (In prep.) visitors can consider bird habitats as different kinds of land use - such as agriculture, forest, heathland, water Etc. - which is one of the characteristics of landscape. In the certain area of the MSc thesis, there are 10 protected bird species and their bird habitats are called as the following; Kingfisher bird habitat, Honey Buzzard bird habitat, Wryneck bird habitat, Woodlark bird habitat, Nightjar bird habitat, Tawny Pipit bird habitat, Black Woodpecker bird habitat, Wheatear bird habitat, Red-backed Shrike bird habitat, Stonechat bird habitat. Since in the MSc thesis, bird habitats seen as virtual landscapes, therefore this concept also has to be explained (see Chapter 2.1.3.).

2.1.3. Landscape

Landscape is constructed from the word of 'land' and 'scape'. The first part – 'land' – is rooted in the Middle Age and even in the earlier time possibly in Old Saxon. It refers to a geographical unit, a meadowland, heathland or common land or more units which are united to form a greater land unit (Tuan, 2002 in Lennon, 2006: 452). The second part – 'scape' – is a different spelling of shape which means: to modify and create in the root meaning. Landscape is a land which is formed by its people, their customs and institutions (Tuan, 2002 in Lennon, 2006: 452). On one hand, landscape is a mode of looking at the environment which surrounds us; on the other hand, it is a way to describe the environment in such a way which can contain both its natural and cultural perspectives. Landscape may allude to the environment mostly to the human formed and landscape may also refer to the representation (especially paintings) showing the meanings which are attached to it. Landscape painting is a mean of

representation signifying ideas and values about the area which is depicted, the composition of lakes, parks which can change the land into a signifier. Besides landscape painting is also a process which colonizes nature by landscape (Olwig, 1993 in Lennon, 2006: 453-454). There are some cultures which do not have a word for landscape. The very first use of the 'landscape' term as a mean of looking the environment (specifically in paintings) was around the 4th century AD in China, later in Italy and in the 15th century in Flanders. Landscape can be a region's topography, a place which is inhabited by people and embed with reciprocal meanings. Landscape also can be a representation of something, a land which is visible from a vantage point, an object and landscape also can be an experience (Cosgrove, 2003 in Lennon 2006: 454). In the context of the MSc thesis, this last definition is the most relevant because of the experience seeking which is equal with the new perspective of visitor interests. Jacobs (2006) contemplates about visitor experiences related to landscapes stating that these are influenced by the characteristics of the physical landscape and also by the biological, cultural and personal factors (Elands and Van Marwijk, 2008: 61).

2.1.4. Bird Habitats seen as Virtual Landscapes

In the context of the MSc thesis, bird habitats are seen as virtual landscapes. This means that whenever the *landscape* or *virtual landscape* occurs in the text, it refers to the bird habitats and vice versa. In order to link these concepts to each other, new conceptualization has been done which created Kingfisher bird habitat seen as virtual landscape (Kingfisher landscape), Honey Buzzard bird habitat seen as virtual landscape (Honey Buzzard landscape), Wryneck bird habitat seen as virtual landscape (Wryneck landscape), Woodlark bird habitat seen as virtual landscape (Woodlark landscape), Nightjar bird habitat seen as virtual landscape (Nightjar landscape), Tawny Pipit bird habitat seen as virtual landscape (Tawny Pipit landscape), Black Woodpecker bird habitat seen as virtual landscape (Black Woodpecker landscape), Wheatear bird habitat seen as virtual landscape (Wheatear landscape), Red-backed Shrike bird habitat seen as virtual landscape (Red-backed Shrike landscape), and Stonechat bird habitat seen as virtual landscape (Stonechat landscape). The 10 bird habitats seen as virtual landscapes belong to one certain area which is used in the MSc thesis to examine the visitor interests' direction. The reason of dealing with 10 bird habitats seen as virtual landscapes is that there are 10 protected breeding bird species on the certain area.

2.1.5. Visitor Interests' Direction

The concept of visitor interest has been altered in the MSc thesis and a new concept has been established which is the visitor interests' direction. It also can be called as direction of visitor interests in which direction refers to the newly created perspective of the visitor interest. Within this new visitor interest perspective, there are 9 visitor interests to which indicators - in question format - have been attached which are used in the research design. It shows why test subjects would go as visitors to the certain area, so what kind of visitor interest attracts them. In this context, visitor interests are

the reason of going to the certain area. These also can be seen as motivations including push factors, but called as pull factors in the MSc thesis, besides it includes the original *pull factors, seeking[1]*, experience seeking, and aim of visitors, pulling (attracting) power. The visitor interests' direction is linked to the bird habitats seen as virtual landscapes, but visitor interests towards birds are also included. Those visitors who come to the area directly because of their visitor interest related to birds, they also have a kind of visitor interest towards the bird habitats seen as virtual landscapes, however it might be indirect.

According to the literature, visitor interest does belong to the theory of visitor motivation. From this theory four perspectives can be linked to bird habitats seen as virtual landscapes, including birds. These are explained in Chapter 2.2. and 2.3.

2.2. Motivations towards Bird Habitats Seen as Virtual Landscapes

There is not so much focus on what motivates visitors to attend to nature areas, since the focus of both social scientists and ecologists is on behavioural practices of nature area visitors (Elands and Van Marwijk, 2008). Cohen (1974: 534) has grouped motivations of site visiting into categories such as pleasure motivation, novelty motivation, change motivation, as well as rationalized motivation. Pleasure motivation includes general reason for site visiting, novelty motivation contains specific reasons for site visiting, while change motivation is about those who visit the site because of the reason for holiday. Rationalized motivation refers to health, education as well as cultural reasons for site visiting (Cohen, 1974: 534 in Dann, 1981).

2.2.1. Pull Factors related to Bird Habitats Seen as Virtual landscapes

Kozak (2002) stated about pull factors that these are tangible attractiveness and characteristics of a site and refers to the resources, recreational facilities adding accommodations as well. A similar approach has been presented by Prideaux (2002) who states that visitor attractions establish visitor motivations towards a place to visit and mentions nature, wildlife, landscape, built heritage, places of historic interest as visitor attractions. Hyde and Harman (2011) also states that pull factors refer to the features of the visited site which attract the visitors to the area. In the traditional sense, pull factors explain the choice of the site (Van Aalten, 2010: 20, Crompton, 1979). According to Pesonen *et al.* (2011) pull factors are motivations which attract visitors to the visited area after making decision about going to somewhere. These pull factors are specific features of the area which is visited for example its natural beauties, people, food, recreation facilities. These features contribute to the decision-making of visitors about which site can meet their visitor motivations (Pesonen *et al.*, 2011). Uusitalo (2010) states that landscape is among the most relevant pull factors which draw those visitors to the site who are interested in nature. In the MSc thesis

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[1] *Motivations:* push factors called as pull factors*, the* original *pull factors and seeking* is marked with *Italic* since these are used after Crompton (1979) and Iso-Ahola (1980) in Hall and Page (2006) as have been showed in Table 1 and explained under it.

the photos about the virtual landscapes represent the bird habitats of the certain area. Primdahl *et al.*, (2010) also support the statement of Uusitalo (2010), since they argue that landscape has the ability to attract visitors to the area. But they also do not examine the direction of visitor interests towards the attractions. Hanqin (1999) identified sightseeing variety as a pull factor which has two variables like (I.) historical or cultural attractions, and (II.) beautiful landscape. This latter one is parallel with the statement of Primdahl, Kristensen, Busck, and Vejre (2010) and Uusitalo (2010) who emphasise the attractive characteristic of landscape concerning visitors coming to the area.

Pull factors are related to 3 aspects which can be external, situational or cognitive such as characteristics of the visited site; leisure, cultural, natural characteristics can be mentioned as examples and its infrastructure (Yoon and Uysal, 2005 in Devesa *et al.*, 2010). The Vacation Travel Attitude Survey (1967) refers to food, scenery as motivations (Dann, 1981). These can be related to the MSc thesis when visitors e.g. would like to have picnic at the certain area. Pan and Ryan (2007) discusses about (A) accommodation/nature amenities and (B) infrastructure as pull factors. Out of these pull factors the following variables have relation with bird habitats seen as virtual landscapes in case the infrastructure is situated in the certain area of the MSc thesis: (1) hiking trails, (2) parking lots, (3) interpretive materials, (4) swimming area, (5) picnic areas, (6) visitor information at the nature area, (7) possible hiking experience, (8) possible outdoor activities (Pay and Ryan, 2007). From the nature amenities, (I) native plants, (II) offering of learning experience related to the nature and the environment which belong to the scope of the MSc thesis. The scenery of mountains is seen which can pull visitors to the area for different activities such as hiking or to see the view and to have picnic. This generates relaxation (Pay and Ryan, 2007) which already belongs to the modes of visitor experiences - diversionary mode - according to Cohen (1979) as it is written by Elands and Lengkeek (2000). This is explained in the sub-chapter 2.2.2.

Empirical study proves that landscape features are points of interest. Totally 180 test subjects were asked in order to take part in a survey. There were 176 test subjects who provided answers, while 4 out of 180 did not participate in it. The result shows that flowers, open meadow, trees, grasslands, snow, mountains, hope of wildlife seeing, opportunity to take photo, general scenery, and 'other' as categories attract the visitors (Clay and Daniel, 2000). In order to be able to see the differences and their ranking, Table 7 has been constructed based on the result of Clay and Daniel (2000).

Table 2: Landscape Features seen as Points of Interest according to Clay and Daniel (2000)

	Landscape features	Number of times when it appeared in the responses
1.	Flowers	87
2.	Open meadow	78
3.	Trees	42
4.	Grasslands	37
5.	Snow	24
6.	Mountains	22
7.	Hope of wildlife seeing opportunity	13
8.	Opportunity to take photo	10
9.	General scenery	7
10.	Other	13
Sum		**333**

In this empirical research they examined where visitors stop during the trip. At those points of interest, questions were asked from the test subjects. Looking at Table 7, it is obvious that more landscape features were appreciated by the test subjects. The reason partly is that it is on-site research and experiences are mixed and changing en-route (Clay and Daniel, 2000). The MSc thesis takes another approach and examines visitor interests' direction before going to the site. Since Table 7 contains recreational category as well such as hope of wildlife seeing opportunity which refers for example to bird watching, or opportunity to take photo. Therefore it is not just about points of interest, but partly also about experience seeking which is explained in details in the sub-chapter 2.2.2.

2.2.2. Visitors' Experience Seeking towards Bird Habitats seen as Virtual Landscapes

Iso-Ahola (1980) theorized seeking which referring to visitors who are seeking something (Hall and Page, 2006). Berg and Koole (2006) mentions visitors who seek wilderness experience, but they do not want to meet with other visitors for example who search for fun or experience related to delight in something. Visitors' experiences in spatial terms come from interest or purpose (Elands and Van Marwijk, 2008: 60).

Table 3 introduces all the modes of visitor experiences defined by Cohen (1979) in Elands and Lengkeek (2000). It is about seeking for those visitor experiences which are relevant for the MSc thesis and can be related to the bird habitats seen as virtual landscapes.

Table 3: The Modes of Visitor Experiences of Cohen (1979) in Elands and Lengkeek (2000: 3-4) Linked to Bird Habitats seen as Virtual Landscapes

Modes	*Meaning of Modes*
The Recreational Mode	Visitors search for *amusement*, *pleasure* experiences.

The Diversionary Mode	Visitors search for rest and relaxation. This mode of visitor experience is directed to *relaxation*.
The Experiential Mode	This experience is directed to *authenticity* in the visited site. Visitors search for *cultural elements*, *landscapes*, *historical* and *natural sites*.
The Experimental Mode	These experiences are directed to such activities *in the natur*e which can *expand the personal boundaries of the visitor*. E.g. mountain climbing.[2]

After fulfilling the primary needs, visitors need nature for doing exercise, learning about it, resting in it, and to delighting in it. This is the way of their recreation (Skov-Petersen and Gimblett, 2008: 1).

Pan and Ryan (2007) summarized the motivations of forest visiting in 5 categories such as relaxation, sociability, mastery of skills, intellectual category, and feeling of belongings in terms of place attachment. However, they look upon these items as push factors, but in the context of the MSc thesis these are considered to be visitors' experience seeking categories they search for and thus also pull visitors to the area. The sociability was part of the MSc thesis in the beginning, but it has been removed from the questionnaire based interview as well in order to reduce its time. There are different views author by author, e.g. Beh and Bruyere (2007) deal with visitor motivation factors and do not differentiate between push and pull factors. They write about experiencing tranquillity and also about relaxing physically, but they categorize them as a type of escape. This for others would be called as push factor, but in the context of the MSc thesis, relaxation belongs to pull factors. For example Vuletić *et al.* (2009) mention forest which is most likely to be visited for resting, recreation and health related purpose (Vuletić and Krajter, *et al.* 2011). This is correspond with the view of Pan and Ryan (2007) who state there are many visitors in the forest who go for enjoying its scenery and being in calm environment. These visitors seek relaxation in forested areas. Cronin (1991) directly refers to experience seeking stating that it is about pursuing of sensations. According to Cronin (1991), it can happen via music, art, during travelling. From which the sensation interest fits to the MSc thesis by taking it into consideration related to bird habitats seen as landscapes (e.g. noise of the greenery, sound of water). Hirschman (1984) refers to the experience seeking including sensory-, novelty- and cognition seeking. She gives the example of smelling flowers as part of sensation seeking which is included in the questionnaire based interview of the MSc thesis.

According to Lundberg (1985) certain things are mentioned by visitors such as sightseeing, eating as well as drinking, walking along the waterfront Etc. (Wickens, 2002). It has many different manifestations such as aesthetic-, physical-, cognitive-,

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[2] It is possible that somebody would like to take a photo about birds in their nest on a tree and therefore, the bird watcher climbs onto the tree.

emotional motivation Etc. (Wickens, 1994 in Wickens, 2002). Visitors go from one site to another site for searching pleasure, and authenticity (Elands and Lengkeek, 2000).

2.2.3. Modes of Experiences related to Bird Habitats Seen as Virtual Landscapes

Table 4 provides a comparison between the findings of Cohen (1979) in Elands and Lengkeek (2000: 3-4) and Lengkeek (2001). All of these items can be linked to the bird habitats seen as landscapes, since visitors like to go to nature areas for different experiences which they seek.

Table 4: Modes of visitor experiences of Cohen (1979) in Elands and Lengkeek (2000: 3-4) and modes of experiences of Lengkeek (2001)

Cohen (1979) in Elands and Lengkeek (2000) – Modes of Visitor Experience (Seeking for Visitor Experiences)	Lengkeek (2001) – Modes of Experience
Diversionary mode	Change
Existential mode	Mastering
Recreational mode	Amusement
Experiential mode	Interest
Experimental mode	Rapture

There are similarities between the two models such as (1) diversionary mode refers to relaxation according to Cohen (1979) in Elands and Lengkeek (2000) – change refers to going to the area because of holiday according to Cohen (1974: 534) in Dann (1981). Lengkeek (2001) writes about change as such which is different from normal life. I argue that both concepts are about resting, therefore the similarity between them is obvious. The other concept couple is different from each other (2) existential mode – mastering, from which existential mode is about experiences related to culture (Cohen, 1979 in Elands and Lengkeek, 2000). Mastering is about opening up unknown things, masking of doubt, and going to the desired area, the hobby has become fulfilment in life (Lengkeek, 2001). The other concept couple is (3) recreational mode – amusement. These are quite similar to each other. Recreational mode refers to fun and pleasure experiences (Cohen, 1979 in Elands and Lengkeek, 2000), a kind of entertainment, while amusement of Lengkeek (2001) is related it to such experiences which can be acquired e.g. by watching a strange creature. In the context of the MSc thesis, to watch strange creatures can refer e.g. to visit the certain area' Nightjar bird habitat in order to see that kind of strange bird in its natural habitat seen as virtual landscape. The next concept couple based on Cohen (1979) is experiential mode – interest, from which experiential mode refers to authentic experiences related to nature, culture (Lengkeek, 2001), while mode of interest possesses the power of attraction related to stories, fear and respect. It is mystical which cannot be understood fully (Lengkeek, 2001). Concerning this concept couple, similarities can be seen e.g. both of them have attraction power, and both of them

have connection with authenticity, besides stories can be told about nature as well. The last concept couple is experimental mode – rapture, from which experimental mode is related to such experiences which can enhance the personal boundaries (Cohen, 1979 in Elands and Lengkeek, 2000), while rapture is about such experience which is characterised by tension. It reaches its climax between the ordinary's suspension and the Other's inaccessibility. These two confront with each other, causing rapture and amazement in which the individual recognizes his/her limitations (Lengkeek, 2001).

Pan and Ryan (2007) discusses about *relaxation* referring to it by 5 variables such as (1) physical relaxation, (2) seeking of tranquillity and contemplation, (3) refreshing of mind, (4) being in calm atmosphere. All of them with the altered 3rd variable[3] refer to the same push factor seen as pull factor in the MSc thesis like (5) relaxing mentally and (6) keeping the body healthy do. Relaxation is included in the modes of visitor experiences of Cohen (1979) and in the modes of experiences of Lengkeek (2001). The other factor is the *sociability,* but it does not part of the MSc thesis. *Mastering of skills* is the third push factor within the work of Pan and Ryan (2007) which is considered to be pull factor in the MSc thesis. It is about using the physical abilities, skills and challenging the abilities. This category is mentioned by Lengkeek (2001) as mode of mastering. *Intellectual factor* is related to learning about nature, discovering new places and things. Gaining inspiration and using of imagination belong to this category, except refreshing the mind, since it belongs to relaxation.

Hanqin (1999) uses different categorization, but refers to experience seeking by discussing about push factors which are seen as pull factors in the MSc thesis. These are the following; (1) relaxation, (2) enhancement of social relationship, (3) knowledge, (4) novelty, (5) prestige. *Relaxation* contains (1/a) doing exercise, and (1/b) resting physically (Hanqin, 1999), but I argue that doing exercise belongs to recreational experience seeking. The second category of Hanqin (1999) is *enhancement of social relationship*, but it is not explained in the MSc thesis, since it is not part of it. The other category is *knowledge* which includes two variables such as (3/a) increasing of the knowledge about the area, (3/b) visiting the area where friends have not visited before. But this latter one is not included in the MSc thesis, since it does not have social aspect. From the fourth category of Hanqin (1999), *novelty* belongs to the MSc thesis and it contains (4/1) finding of excitement and thrills. The fifth category of Hanqin (1999) is called *prestige* which contains the variable called (5/1) being brave and advantageous. About this last variable, I argue that it belongs more to the recreational experience seeking e.g. swimming in a pond or climbing on a tree Lengkeek (2001).

The categorization of Pan and Ryan (2007) partly can be linked to the categorization of Hanqin (1999). The similarities which are important for the MSc thesis are the

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[3] Refreshing the mind belongs to relaxation, while gaining of inspiration belongs to the intellectual category.

following (before hyphens with <u>underlined letters</u>: concepts from Pan and Ryan, 2007, after hyphens with *Italic*: concepts from Hanqin, 1999: <u>relaxation</u> - *relaxation*, <u>intellectual factor</u> – *knowledge*, and the differences between the two categorisations are the following: mastering of skills, sense of belonging (Pan and Ryan, 2007), novelty and prestige (Hanqin, 1999).

Another categorization has been established by Beh and Bruyere (2007) who do not differentiate between push and pull factors, but discuss about visitor motivation factors like (1) escaping, (2) culture, (3) adventure, (4) learning, (5) nature, (6) general viewing. The categorization of Beh and Bruyere (2007) show some similarities comparing it to the categorization of Hanqin (1999), and Pan and Ryan (2007). The similarities among the three categorizations are shown in table 5, but are explained comprehensively afterwards.

Table 5: Similarities among Three Categorizations

Pan and Ryan (2007)	Hanqin (1999)	Beh and Bruyere (2007)
Relaxation	Relaxation	Escape
Intellectual	Knowledge	Culture
Natural amenities	Sightseeing variety	Nature
		General viewing

From Beh and Bruyere (2007) escaping refers to two variables like (1/a) experiencing tranquillity and (1/b) resting physically. I argue that the escaping corresponds with relaxation. Culture only has one variable such as learning of the park's history of the research with which Beh and Bruyere (2007) deal with. Therefore, I argue that culture should be named differently e.g. history. Beh and Bruyere (2007) defined a factor called adventure which has several variables e.g. (3/a) to have story to tell after visiting an area, (3/b) experiencing something new. The other visitor motivation factor is called learning which contains some variables like (5/a) learning about land topography, (5/b) learning about the ecosystem of the area. There is a third variable as well, but that belongs specifically to the bird related visitor interest and thus it is contained in that part of the MSc thesis. The other visitor motivation factor is nature which contains the following variables such as (6/a) learning about nature, (6/b) being close to nature, (6/c) studying nature. The last category of visitor motivation factor is general-viewing which has two variables like (7/a) viewing wildlife, (7/b) viewing the landscape beauty of the area (Beh and Bruyere, 2007).

Besides these above mentioned categorization, Bigley and Lee *et al.* (2010) come up with another one which contains three motivation factors and does not differentiate between push and pull factors. The motivation factors are the following: (1) knowledge/appreciation of history, culture motivation, (2) curiosity/adventure motivation and (3) nature-based visitor motivation. Their variables are (1/a) studying

the history of the area, (1/b) education, (2/a) adventure seeking, (2/b) novelty seeking, and (2/c) adventure seeking on the area. The third motivation factor contains (3/a) watching the natural environment, (3/b) watching of animals and plants in the area (Bigley and Lee *et al.,* 2010), but from which only the watching of plants belong to the visitor interest towards birds.

Table 6 below shows the similarities among four type of categorization. Sometimes it happens that the authors uses different names, but covers the same meaning behind the concepts. The MSc thesis synchronizes them.

Table 6: Similarities among Four Categorizations

Pan and Ryan (2007)	Hanqin (1999)	Beh and Bruyere (2007)	Bigley and Lee *et al.* (2010)
Relaxation	Relaxation	Escape	-
Intellectual	Knowledge	Culture	Knowledge/appreciation of history, culture motivation
Natural amenities	Sightseeing variety	Nature	Nature-based visitor motivation
		General viewing	
-	Novelty	Adventure	Curiosity/adventure motivation

An example is Hanqin (1999) who uses the novelty, but discusses about adventure under this concept. This means that novelty of Hanqin (1999) is similar to the adventure from Beh and Bruyere (2007) and also to the curiosity/adventure motivation of Bigley and Lee *et al.,* (2010). The next sub-chapter discusses about the economic aspect of visiting the bird habitats seen as virtual landscapes.

2.2.4. Economic Aspect of Visiting the Bird Habitats Seen as Virtual Landscapes

Beunen and Vries (2011) argue that visiting the attraction is a relevant economic activity, which therefore has to be discussed in the MSc thesis. The reason of this is the contemplation of Reinius and Fredman (2007) who refer to protected areas as attractions and by doing so, they state that biodiversity is itself an attraction and worth to visit. Therefore it is easy to conclude that economic interest does exist towards bird habitats seen as virtual landscapes. Holden (2000) writes about the income of visiting the attractions. It can contribute to the conservation of the environment compared to other development alternatives which could make larger environmental damage. But there is an opposition of this argument, since when a natural habitat does not have such economic value which is sufficient compared to alternative development options, then a cause is found for their removal (Holden, 2000: 121). Therefore it is important to find out more about economic interest towards bird habitats which is embedded in the questionnaire based interviews of the MSc thesis. Shackley (1996: 127) mentions estimating of gate fees, spending of

money on accommodation, food, generated employment which could help to value wildlife (Holden, 2000: 121). Wells (1993) also refers to the economic value concerning nature related site visiting using importance instead of valuing of site visiting, while mentioning the same items like money spent on accommodation, guided tour, food Etc. In the MSc thesis, guided tour is conceptualized as bird watching tour observing it from economic interest and it is asked in the questionnaire based interviews that people are willing to give bird watching tour in order to earn money. Ryan *et al.* (2003) refers to economic interest by discussing about the conservation of the area in order to get payment for conservation. This aspect refers to the economic interest towards the bird habitats seen as virtual landscapes.

2.3. Motivations towards Birds

2.3.1. Pull Factors related to Birds

Beh and Buyere (2007) discuss about two visitor motivational factors which can be related to birds such as learning and mega-fauna. In the context of learning, they mention learning about African birds. In the MSc thesis, learning about birds is used, since it is related to the 10 bird species of the certain area. But if it would be related only to the African birds, the Black Woodpecker would not be part of the analysis based on the African bird list of the Wikipedia (2012)[4]. Related to the mega-fauna, however Beh and Buyere (2007) discuss about viewing and learning about zebras. But as Adams *et al.* (2011) state that birds are also part of wildlife, therefore I argue that among motivational factors which are related to the mega-fauna, can be related to birds as well in an altered way such as viewing and learning about fauna. The category of Bigley and Lee *et al.* (2010) suits to this, since they mention the nature-based visitor motivation underpinned by watching of animals in their research area which they deal with.

2.3.2. Seeking for Visitor Experience related to Birds

Cohen suggests that phenomenological types of visitor experiences are attributable to a parallel variation in visitor motivation (Dann, 1981). Apostolopoulos (1996) refers to the work of Cohen as a search for visitor experience which might be distinguished in 5 types like recreational, diversionary, experiential, experimental and existential mode, but the existential mode does not fit into the context of the MSc thesis. Dann (1981) also discusses about the phenomenology of Cohen which is organized in ascending order starting from that which is mostly superficial. This is when somebody is motivated by the search for pleasure (Cohen, 1979b: 192 in Dann, 1981). Wickens (2002) also states that choosing of a site is built upon the pursuing for pleasure as well. The phenomenology of Cohen (1979b) ends with those who are motivated by the search for meaning (Dann, 1981). Lots of theoretical discussions have been informed by the seeking of authenticity which is visitor motivation. Within the study of visiting the attractions, authenticity seeking is one of the most famous theoretical debates. Visiting a site can be seen as a search for authenticity in order to encounter with real things (Mowforth and Munt, 1998: 55 in Wearing, 2010: 27). On the internet, people can watch photos, videos, as well as listen to bird songs (see BirdLife International (2012a): Internet Bird Collection, Robinson, R.A. (2005): BTO images, videos, sound). When visitors would like to watch the birds in their real natural environment and not only to read about them in professional journals or to look at photos, pictures about them on the internet. It refers to the authentic experience

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[4] The Wikipedia (2012) shows the list of African birds. The African birds are the following: Common Kingfisher (Alcedo atthis), European Honey Buzzard (Pernis apivorus), the Eurasian Nightjar (Caprimulgus europaeus), Tawny Pipit (Anthus campestris), Wood Lark (Lullula arborea), Eurasian Wryneck (Jynx torquilla), Northern Wheatear (Oenanthe oenanthe), Red-backed Shrike (Lanius collurio), European Stonechat (Saxicola rubicola). The Black Woodpecker (Dryocopus martius) is not included in the list of African birds of the Wikipedia (2012).

seeking related to birds. Some visitors perhaps seek the experience of feeding birds, and therefore visit the area Etc. Moss and Esson (2010) writes about feeding birds in their article. Cronin (1991) however defines it differently stating that experience seeking is about pursuing of sensations. It can happen through music, visiting an area and through art (Cronin, 1991). It fits into the MSc thesis by taking it into consideration as sensation interest related to birds (e.g. listening to bird songs). This can be linked to Hirschman (1984) as well who refers to listening music related to sensation seeking.

Table 2 introduces all the modes of visitor experiences defined by Cohen (1979) in Elands and Lengkeek (2000) which are about the seeking for those visitor experiences which are relevant for the MSc thesis and can be related to birds.

Table 7: The Modes of Visitor Experiences of Cohen (1979) in Elands and Lengkeek (2000: 3-4) – which can be Linked to Birds

Modes	*Meaning of Modes*
The Recreational Mode	Visitors search for *amusement*, *pleasure* experiences.
The Diversionary Mode	Visitors search for relaxation.
The Experiential Mode	This experience is directed to *authenticity* in the visited site. Visitors search for *cultural elements*, *landscapes*, *historical* and *natural sites*.
The Experimental Mode	These experiences are related to such activities *in the nature* which can *expand the personal boundaries of the visitor*. E.g. mountain climbing.[5]

These are all about experience seeking with which Hirschman (1984) deals and according to that article experience seeking has three components such as cognition (information) seeking, sensation seeking and novelty seeking. Finally, Hirschman (1984) concludes that there are consumers who seek cognition, there are consumers who seek sensation and there are also such consumers who seek novelty. However, it is also possible that some consumers seek all the three components of experience seeking together.

2.3.3. Modes of Experiences related to Birds
The modes of visitor experiences of Cohen (1979) provide the basic for the theory of modes of experiences of Lengkeek (2001). Lengkeek (2001) identifies five modes of experience such as amusement, change, interest, rapture, and mastering. Cohen's diversionary mode is overlapped with the change mode of experience of Lengkeek (2001). These can be linked to the MSc thesis. Lengkeek (2001) states that mode of amusement is called recreational mode within the modes of visitor experiences established by Cohen (1979). Both definitions suit to the view of the MSc thesis. Some visitors go to the certain area with the desire to delight in something, so to say they seek this type of experience (Jacobsen, 1996 in Lengkeek 2001). Cohen (1979)

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[5] It is possible that somebody would like to take a photo about birds in their nest on a tree and therefore, the bird watcher climbs onto the tree.

refs to this mode of visitor experience as experimental mode. This is the so-called rapture where the fulfilment of desire causes rapture and it also can be linked to space and time (Lengkeek, 2001). It is easy to connect this aspect to the MSc thesis when we imagine e.g. a Kingfisher which is very fast and thus it can fly over large distances within a short time. According to Lengkeek (2001) the mode of interest has the power of attraction, and the mode of interest can involve respect, stories or fear. Cohen (1979) calls the related visitor experience as experiential mode. Lengkeek (2001) notes that the mode of mastering covers such experiences where the inaccessible and the unknown have been opened up by masking the previous doubt. This is similar to the category of the learning about birds related to the research area of Beh and Bruyere (2007).

2.3.4. Visitor Interest towards Birds

Davey (2006) reveals that visitors are motivated by non-visible animals and while they look for them, it generates visitor interest. But an opposite view is discussed by Moss and Esson (2010) who approach the issue from visitor management in zoo environment and refer to feeding of birds in order to increase their activity level. While this could be beneficial to birds, it could also be beneficial to visitors. This would be extremely useful for those species which might have interesting educational story, but in normal circumstances they do not attract the interest of visitors immediately. This is particularly true concerning bird species. If the activity level could be increased when visitors likely to watch them and if it would be combined with intensive education such as public presentation about them or interpretation Etc., then the species' educational role, value would be more obvious (Moss and Esson, 2010). The EC Europe (2012) argues that birds provide pleasure, inspiration by watching them as well as by listening to them.

Holden (2000) discusses about the argumentation of Shackley (1996) who puts emphasis on danger of economic valuation regarding to the risk related to the wildlife. The reason of this argumentation that many species of wildlife are not considered as attractive as elephants or lions are for the visitors, but these species do have a role in the area's ecosystem (Holden, 2000: 121). This is supported by the statement which says that bird species are part of the ecosystem which human need for survival (EC Europe, 2012). The economic value of such species, which are not in the itinerary of visitors concerning animals to view, is undermined because this causes the lack of ability to define their value. Since their value is undermined, these animals face to threat concerning their survival (Holden, 2000: 121). Therefore it is important to find out more about economic interest towards birds. Fernandez-Juricic and Jokimäki (2001) discusses about three possibilities to conserve birds such as management, environmental education and research. About this latter one, Horvath (1974), Stoll and Johnson (1984) state that only a few researchers have put the economic contribution of bird watching itself into the focus of the research (Hvenegaard *et al.*, 1989). In the north part of America, bird watching (birding) is

among the fastest growing wildlife related recreational activities according to Harrison (1984) and Butler (1984) in Hvenegaard *et al.* (1989). It involves around 20-30 million visitors annually according to Filion (1987), Lyons (1982), Mangun (1984), More (1979), Shaw and Kellert (1985) in Hvenegaard (1989). In the area of Canada, minimum 13,1% of the inhabitants participated in special tours in order to take photos, observe birds, or learn about birds (Jacquemot and Filion, 1987 in Hvenegaard *et al.* (1989).

Boo (1990) has calculated the economic value of the lion related to a National Park and the value of each lion is expressed in visitor pulling power (Holden, 2000: 120). This can be linked to each visitor interest towards birds in the MSc thesis. The reason of this argumentation is that visitor interests' direction pull the visitors to the bird habitats of the certain area which are seen as virtual landscapes.

2.4. Relations between Concepts

Before presenting the relations between the concepts, the overview of the main concepts is presented with brief explanation where it is necessary.

- Visitor interests' direction = Motivations = Pull factors = Seeking = Experience seeking = Visitors' aim = Reason of Site Visiting = Attracting (Pulling) Power
- Visitors = Local Residents + Excursionists + 'Day-trippers' + Longer stayers + Foreign Tourists (Swarbrooke, 2002)
- Visitor interests' direction can be researched before visiting the site and this attracts the visitors to the certain area.
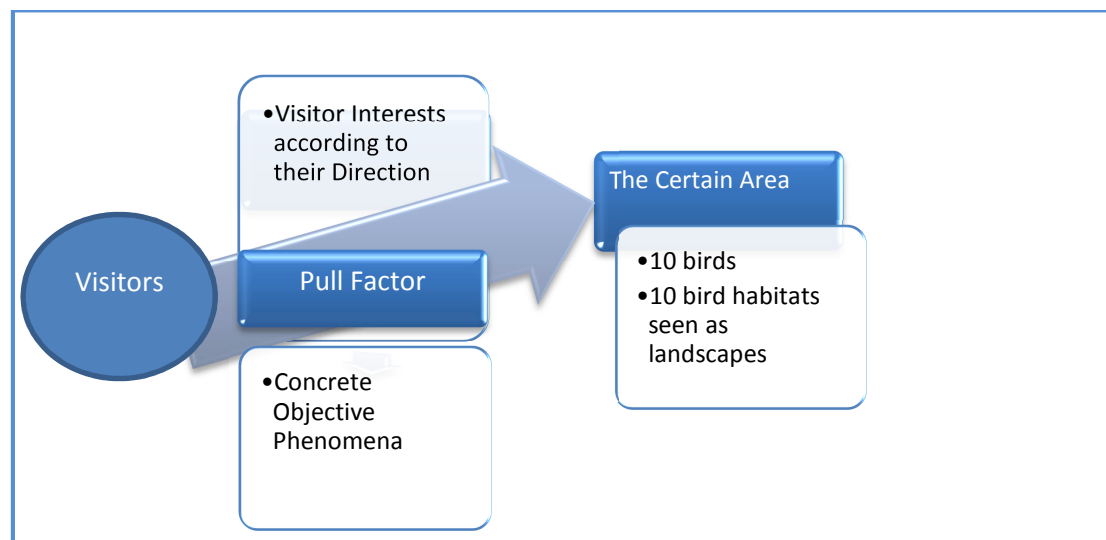
Box 1: Conceptual Model of the MSc Thesis related to the Visitor Interests' Direction

The visitor interests' direction is not about the depth of the interest, and it is not about the strength of it, but it is a new aspect of motivations. The visitor interests according to their direction attract the test subjects as visitors to the certain area. The visitor interests' direction is objective phenomenon linked to the bird habitats seen as

virtual landscapes and to birds in the certain area. Box 1 shows the conceptual model of the MSc thesis.

2.5. Indicators of the Questionnaire Based Interview Linked to Visitor Interests' Direction

This part of the MSc thesis establishes theoretical ground for the indicators of the questionnaire based interview and links them to the newly established categorization of visitor interests' direction (sub-chapter 3.1.4.). But this inventory is complete together with the literature review of the MSc thesis. In order to avoid many repetitions, not every indicator has been discussed here.

The first group of indicators is the purple fields dealing with living on the certain area. This is linked to the general interest according to the newly established categorization called visitor interests' direction. Nelson *et al.* (2004: 7) quote which was said in Florida: "I like native vegetation too because it attracts birds and other wildlife, a major part of the attraction of living where we do". This view fits to the first group of indicators related to living in the certain area because of the landscape and also because of the birds. The next quotation which suits to this context has been quoted by Nelson *et al.* (2004: 7): "I love the forest and I love nature, and there are more animals and wildlife with trees." – said in Minnesota. In the MSc thesis, forest, nature similarly cover the concept of bird habitat seen as virtual landscape, therefore the previous quotation is also equal with the general interest according to the visitor interests' direction.

The second group of indicators (the yellow fields in sub-chapter 3.1.4.) is linked to the relaxation seeking interest based on the visitor interests' direction. To them, the characteristics of natural landscapes can be connected which can be enjoyed because of the sense of peace and tranquillity which they provide. Besides, these can be enjoyed because of the feeling which bird songs or running water can cause (Kelly and Nankervis, 2001: 60). Spending of holiday on the certain area does also belong to this group of indicators explained by the "diversionary mode" of Cohen (1979) in Elands and Lengkeek (2000) and also by the "change" of Cohen (1974: 534) in Dann (1981).

The third group of indicators (1st blue fields in the sub-chapter 3.1.4.) is linked to the recreation seeking interest related to the new categorization. Kelly and Nankervis (2001: 45) state that the activity is generally the main purpose of site visiting. Landsberg *et al.* (2001) mentions horseback riding, cycling and dog walking on leash as outdoor activities. While Sollart and Niet (2006) write about walking and hiking as outdoor activities which are the most famous ones among the Dutch (Van Marwijk, 2009: 51). The physical exercise is also part of this group of indicators about which Pan and Ryan (2007) mention that visitors can use their physical abilities and skills, as well as challenge their abilities. The recreation seeking interest towards birds is built upon the recreational mode of Cohen (1979), and the mode of amusement identified by Lengkeek (2001).

The fourth group of indicators (brown group in sub-chapter 3.1.4.) is linked to the amazement seeking interest concerning the visitor interests' direction. These indicators confirm what has been said in Minnesota that people can delight in wildlife watching, and in feeding of birds (Nelson *et al.*, 2004: 7). The amazement seeking interest towards bird habitats and birds as well has been built upon the mode of rapture defined by Lengkeek (2001).

The fifth group of indicators (pink fields in sub-chapter 3.1.4.) is linked to the learning seeking interest. As related indicators, Stevenson (2000) mentions self-development and lifelong educational interests as motivations which are increasingly becoming powerful among site visiting experiences (Wearing et al., 2010: 31). Learning about the history of a park defined by Beh and Bruyere (2007) and the knowledge as well as appreciation of park history established by Bigley, Lee, *et al.* (2010) are also visitor motivations which are linked to the learning seeking interest. Among the 5th group of indicators (pink), there is a bird related indicator which also can be linked to the learning about birds defined by Beh and Bruyere (2007).

The sixth group of indicators (green fields in see sub-chapter 3.1.4.) can be linked to the scientific interest. This is built upon the mode of mastering of Lengkeek (2001), and also supported by the skills mastery, and the intellectual motivation, and by the challenging of abilities, using of physical abilities and skills based on Pan and Ryan (2007). These can be linked to the scientific interest towards bird habitats and birds as well.

The seventh group of indicators (grey fields in the sub-chapter 3.1.4.) is linked to the creativity interest according to the newly defined categorization of visitor motivations. Kelly and Nankervis (2001: 59) state that landscape is similar to art, since people know what they like, but perhaps they do not know the reason of it. In the context of the MSc thesis, based on the statement above, bird habitats are also similar to art which are seen as virtual landscapes in the MSc thesis. There are lots of artists and writers who have found such qualities in protected areas inspiring them for imagination and creative expression. Philosophers have also found inspiration in nature areas which are wild, sources and resources as well (Graeme and Colin, 2008: 114). Another supportive category of creativity interest towards bird habitats seen as virtual landscapes is the gaining of inspiration, and using the imagination defined by Pan and Ryan (2007). The seventh group of indicators (grey group in sub-chapter 3.1.4.) contains one indicator related to birds. There is a statement derived from the book of Manfredo (2008) in which he writes about a woodpecker in such a way which would fit e.g. into the context of a novel or a poem. "A woodpecker drums on the vent pipes of my house, telling everyone that the territory I regard as mine is also his" Manfredo (2008: 5). Since, he mentions this as a kind of human-wildlife conflict, therefore in the MSc thesis, it is not related to listening to bird songs during which

visitors can rest and relax (2nd group of indicators – yellow group). But it is connected to the creativity interest based on the statement of the European Commission (2004), since it states that visitors acquires creativeness when they watch and listen to birds.

The eighth group of indicators (orange group of questions in sub-chapter 3.1.4.) is linked to the economic interest (willingness-to-earn money) within the new approach of motivation categorization. Landscape value is mentioned by Vining *et al.* (1984) stating that the scenic quality of a site can be improved in forested landscapes by developing living places. In the MSc thesis, this fits to the indicator of building small house which is accepted economically refers to this. Kelly and Nankervis (2001) states that the landscape has value to the sector which deals with the visiting of the attractions. The landscapes are sold by those who organize tours and also by those who are involved in developing destinations for visitors (Kelly and Nankervis, 2001). In the context of the MSc thesis, the same can be said about bird habitats too, since these are seen as virtual landscapes. The last question within each group of indicators from group 1 till group 7, and group 9 are linked to willingness-to-pay for the visitor interests according to their direction. These indicators show the depth of the interest providing evidence for the statement of Kelly and Nankervis (2001: 61) who argue that the activity of visiting the attractions as activity has value which can be beneficial economically. Beunen and Vries (2011) reveal the same. Besides, it is also parallel with the statement of Manfredo (2008: 2) who reveals that visiting the attractions are getting more and more important for visitors and have substantial economic impact.
The eighth group of indicators (orange group in sub-chapter 3.1.4.) contains two indicators related to birds; the first one is about bird watching tour for environmental education, and the second one is research for conserving birds. These are established based on Fernandez-Juricic and Jokimäki (2001). These two indicators related to birds have been concluded as one in the result section related to birds.

The ninth group of indicators (second blue group of questions in sub-chapter 3.1.4.) is linked to the other interest of the new categorization approach of visitor motivations. It gathers the following reasons of site visiting such as mode of interest from Lengkeek (2001), discovering of new places and things identified by Pan and Ryan (2007) also belongs to this category. Experiencing something new from Beh and Bruyere (2007), finding excitement from Hanqin (1999), and offering of excitement by the site from Bigley, Lee, *et al.* (2010) also can be attached to the other interest towards bird habitats seen as virtual landscapes. It contains one indicator which is about birds. It is related to the article of Moss and Esson (2010) which deals with the feeding of birds in order to increase their activity level for the sake of visitor management. This latter one is included in the questionnaire based interview with the indicator (question) that the test subject would like to feed birds voluntarily or not.

2.6. Conclusion of Literature Research

The literature research has pointed out that on the field of motivation studies there are contradicting views. The MSc thesis has established a new visitor motivation categorization from the aspect of visitor interests' direction. A motivation.xlsx file has been constructed by the different literature findings showing the different motivations. This table is not included in the MSc thesis, but part of the MSc thesis files. Out of this table the related categories herewith are presented in text format. The findings are pointed out in a way which represents the visitor interests according to their direction. The rows of the table are organized in a way which corresponds with the new visitor interests' direction. The corresponding motivation categories are organized, and re-organized according to this newly established categorization, and also according to the authors who are named at the top of the columns.

Relaxation seeking interest is one of the visitor interests according to the new categorization. In the literature, the diversionary mode of Cohen (1979), relaxation, contemplation, seeking of tranquillity, physical relaxation, refreshing of the mind, being in calm atmosphere and relaxing mentally (Pan and Ryan, 2007) belong to the relaxation seeking interest. From the categorization of Hanqin (1999), escape, relaxation, resting physically are also part of it. According to Cohen (1974: 534) the reason of change refers to those visitors who go to a site for going to holiday (Dann, 1981). Besides, Conin (1991) and Hirschman (1984) refer to the sensation related interest through which the indicator of listening to bird songs can be attached to the relaxation seeking interest.

Scientific interest is another category of visitor interests according to their direction. The attached motivations to this visitor interest is the mastering from Lengkeek, (2001), and skill mastery, using of physical abilities and skills, challenging of abilities, discovering of new places and things, intellectual as a category from Pan and Ryan (2007).

Learning seeking interest is the next category which is also one of the visitor interests according to their direction. To this visitor interest, the following motivations can be attached such as learning about nature from Pan and Ryan (2007), knowledge, increasing of knowledge about the destination from Hanqin (1999), learning, learning about birds, -about nature, -about the history of park from Beh and Bruyere (2007). Since according to Cosgrove (2003) in Lennon (2006: 454) landscape can be a region's topography, therefore the category of learning about the topography of the land from Beh and Bruyere (2007) fits to the learning seeking interest towards bird habitats seen as virtual landscapes. From Bigley, Lee, *et al.* (2010), knowledge and appreciation of history as well as learning about history also belong to this visitor interest category.

The next visitor interest is called creativity interest to which the following categories do belong based on the literature research such as using the imagination, gaining of

inspiration from Pan and Ryan (2007), and viewing of the scenic beauty of the areas from Beh and Bruyere (2007). Besides, Turnhout *et al.* (2004) also discuss about the inspiration as a purpose why nature is visited. But the example of that specific woodpecker which drums on the vent pipes mentioned by Manfredo (2008: 5) also fits into this aspect. Pan and Ryan (2007) mention the category of enough picnic areas with tables as a pull factor, but in the MSc thesis it has to be altered into having picnic at the certain area. By doing so, it can be linked to the relaxation seeking interest.

Recreation seeking interest gathers such categories from the literature like experiential mode, recreational mode from Cohen (1979), amusement from Lengkeek (2001), keeping the body healthy from Pan and Ryan (2007). This latter one can be supported also by the rationalized motivation of Cohen (1974: 534) in Dann (1981) which contains also the reason of health for site visit. Hanqin (1999) also supports the recreation seeking interest by referring to being daring and adventuresome. Besides, the Vacation Travel Attitude Survey (1967) refers to food as a motivation (Dann, 1981).

Amazement seeking interest collects the categories such as experimental mode from Cohen (1979), mode of rapture from Lengkeek (2001), viewing of wildlife from Beh and Bruyere (2007), watching of animals and plants in the area from Bigley, Lee, *et al.,* (2010). Amazement seeking interest is supported also by the statement of the European Commission (2004) which says that visitors acquires joy, satisfaction when they watch or listen to birds.

General interest refers to the category of Beh and Bruyere (2007) which is about being close to nature in a unique area. Besides, general interest is also built upon the pleasure motivation from Cohen (1974) which discusses about it as general reason for site visiting (Dann, 1981).

Economic interest in the MSc thesis refers to the category of Bigley, Lee, *et al.* (2010) which is about going to the area for educational purpose. This is supported by Stevenson (2000) who mentions self-development and lifelong educational interest as a motivation. This can be linked to the economic interest towards bird habitats seen as virtual landscapes, and towards birds as well.

The other interest of the new categorization according to the visitor interests' direction is underpinned by the stories which are part of the mode of interest identified by Lengkeek (2001). Besides, the novelty motivation containing specific reasons for site visiting, and the rationalized motivation containing education and cultural reasons for site visiting based on Cohen (1974: 534) in Dann (1981) also supports the other interest towards bird habitats seen as virtual landscapes. Concerning the education, in this aspect voluntary education has to be mentioned, and not the profit-oriented one. The novelty seeking also mentioned by Hirschman (1984) and thus her category also can be linked to the other interest.

To the visitor interests' direction, indicators – in question format - have been established and attached in the questionnaire based interview. The testing procedure of the questionnaire based interview has been done by cognitive interviewing (see Chapter 4.2. and 4.3.).

3. Methods

Basically, survey research is done in the MSc thesis which is the most often used research method for measuring attitudes, knowledge and opinions with many test subjects (Verhoeven and Van Baal, 2008: 98). The survey gives opportunity to ask a lots of questions from the test subjects which can be analysed in a quantitative way (Verhoeven and Van Baal, 2008: 102). The traditional survey is considered as quantitative data according to Sieber (1973) in Chreswell (2003: 14). The economy of the survey design is mentioned as an advantage (Babbie, 1990 in Creswell, 2009) which is supported by Kumar (2011: 148) who emphasises the low cost of it as an advantage besides its possible anonymity. Walliman (2009) states about statistical tests that the more cases are analysed, the more reliable they are usually. But 20 cases or more is needed to make sense of the quantitative analysis with SPSS. Some tests allow working with even less cases (Walliman, 2009: 113). Surveys can generate extensive data. This method can achieve more breadth and depth as well as show relationships among variables. It creates possibility for quantitative data-analysis. Another important feature of the survey method is that the researcher can gather data by less time-consuming method (Verschuren, Doorewaard et al., 2010: 162). Based on the reasoning of Walliman (2009: 113) who writes about 20 cases or more, the MSc thesis data collection has been aimed to gather 30 test subjects. The result of the questionnaire based interviews are analysed with Microsoft Excel charts, frequency-, and ANOVA tables which are based on the dichotomous variables. Vaske (2008: 14) discusses about the level of measurements from which the dichotomous refers to that variable which has two response categories. In the MSc thesis, most of the questions provide dichotomous variables with the response of "YES" or "NO".

3.1. Questionnaire Based Interview with Power Point Presentation as an Experiment

In spite of the relevance of the research tool, there is no specific guidelines for those who are beginners concerning how to set up a research tool. Students are left to study for themselves under the coaching of their supervisor. As a principle it is important to establish validity of the research instrument by relating the questions to be asked to the objectives of the study (Kumar, 2011: 156). In the current research, the questionnaire based interview is used as a kind of experiment. In the experiment, the composition of the group is very important. The test subjects are not called as respondents and they have to have certain common characteristics (Verhoeven and Van Baal, 2008: 106).

For the MSc thesis, the questionnaire as a mean of data gathering is used as a research instrument (Kumar, 2011: 24), but in an altered way. The research tool is a questionnaire based interview which is a kind of experiment carried out in the "Leeuwenborch lab". In the questionnaire, questions are read by the test subjects and after interpreting what is expected, they give written answer (Kumar, 2011: 145), but

in the MSc thesis questionnaire based interviews mostly closed questions are used. About closed questions, Kumar (2011: 151) states that the answers can be registered by the test subject or by the investigator. In the MSc thesis the investigator – also called the MSc thesis writer – does ask the questions and register the answers as well. The questions have been read loudly and filled in by the MSc thesis writer who conducts the research. This is how the self-administration of the questionnaire based interview is achieved. A rule states that closed questions are useful for gathering facts (Kumar, 2011: 153). In the MSc thesis the former one is applied, but some of the test subjects were so open that for closed questions they replied as for open ended questions. Lots of the questionnaire based interviews have been recorded by voice recorder which also adds to the validity of the research instrument. The questions which have been asked are mostly visitor interest related, but there were also some other questions e.g. about the educational background of the test subjects. The age of the test subjects were not asked based on a pre-research which has been done on the Facebook. From 30 Dutch Facebook friends, 17 do not show the year of their birthday via this Social Media Website. The conclusion has been drawn that most of the Dutch people do not like to speak about it.

When a questionnaire based research is conducted, the language of the questionnaire has to be translated into the language of the test subject (Verhoeven and Van Baal, 2008: 145). Therefore in current case, it would be logical to conduct the research with a questionnaire based interview translated into Dutch language, since the test subjects are Dutch students. But it has been done in English because of the face-to-face questionnaire based interview method which is applied. For the MSc thesis writer to read in English is easier and faster at this moment than to read in Dutch which would be inefficient, time consuming, and maybe not understandable.

Verhoeven and Van Baal (2008) states when the questions are not understandable for the test subjects then partial non-response can occur. Non-response is present when for example people are not willing to take part in a research or when test subjects are sick, furthermore it can also occur when people are not at home because of holiday, work Etc. (Verhoeven and Van Baal, 2008: 178). Partial non-response is also possible in survey research when the question is not understandable for the test subject, when the question is not applicable for him/her, when the test subject would not like to reply for the question or when the test subject do not have opinion about the question or does not possess the answer for that (Verhoeven and Van Baal, 2008: 178). The series of cognitive interviews which is part of the testing process is used in the MSc thesis to improve the questionnaire based interview design.

The power point presentation on a laptop has been shown during the questionnaire based interview, meanwhile on another computer the data has been entered by the MSc thesis writer. The test subjects could see the photos of the bird habitats continuously while different type of bird songs could be listened. It is therefore a kind of "single-blind" experiment, since the birds have been not shown to the test

subjects. They have not known which bird belongs to which bird habitat. And they did not have to deal with filling in the questionnaire, just to answer for the orally asked questions. Therefore, it is faster than if the questionnaire would be filled in by the test subjects.

About the photos used in the power point presentation, the following characteristics could be told:

- None of the photos contains visitors.
- Every photo is horizontally oriented, except one.
- The photos are colourful and in full-colour.
- The photos were ordered (Van Marwijk, 2008: 117) unconsciously but - according to one of test subjects – these were organized according to the precipitation and tree cover, but there are exemptions.
- All photos are about the certain area, but the photos represent its 10 bird habitats seen as landscapes.
- Photos used in the pilot-testing of the questionnaire based interviews have been taken by the MSc thesis writer in the summer of 2009.
- Photos used in the power point presentation have been provided and taken by Henk Sierdsema who works at the SOVON, Dutch Centre for Field Ornithology and also by Gilbert Maas who works at the Alterra.

With the power point presentation, photos have been shown about the bird habitats seen as landscapes (also called virtual landscapes). Besides, bird songs (see Table 9) could be listened from the laptop. The virtual landscapes are more attractive for the test subjects to think about the reason of the imagined visit to the certain area.

Table 8: List of Bird Songs' Characteristics related to the Questionnaire Photos

Name of Birds	Links to the Bird Songs	Recorder
Black Woodpecker	http://www.xeno-canto.org/species/Dryocopus-martius?&view=0&pagenumber=2 retrieved 3 April 2012	*Volker Arnold*
Honey Buzzard	http://www.birdsongs.it/songs/pernis_apivorus/pernis_apivorus.html 5 April 2012	*Marco Dragonetti*
Wryneck	http://www.xeno-canto.org/species/Jynx-torquilla retrieved 3 April 2012	*David Farrow*
Nightjar	http://www.xeno-canto.org/species/Caprimulgus-europaeus retrieved 3 April 2012	*Andrew McCafferty*
Wood Lark	http://www.xeno-canto.org/species/Lullula-arborea retrieved 3 April 2012	*Herman van Oosten*
Stonechat	http://www.xeno-canto.org/species/Saxicola-torquatus retrieved 5 April 2012	*Marcell Claassen*
Wheatear	http://www.xeno-canto.org/species/Oenanthe-oenanthe retrieved 5 April 2012	*Herman van Oosten*
Tawny Pipit	http://www.xeno-canto.org/species/Anthus-campestris retrieved 5 April 2012	*Patrik Åberg*

| Red-backed Shrike | http://www.xeno-canto.org/species/Lanius-collurio?&view=0&pagenumber=1 retrieved 5 April 2012 | Mathias Ritschard |
| Kingfisher | http://www.xeno-canto.org/species/Alcedo-atthis retrieved 3 April 2012 | Patrik Åberg |

The photos are about the bird habitats of the certain area which are seen as virtual landscapes. The virtual landscapes represent the bird habitats of the 10 protected bird species, therefore the name of the birds and their habitats as virtual landscapes are joined together in the MSc thesis. These are named as the following such as Nightjar landscape, Wood Lark landscape, Wryneck landscape, Tawny Pipit landscape, Kingfisher landscape, Red-backed Shrike landscape, Kingfisher landscape, Wheatear landscape, Honey Buzzard landscape and Black Woodpecker landscape. The photos aim to help the test subjects to decide on future visiting of the area to which the photos belong. E.g. Berg and Koole (2006), Palmer (2007), Ribe (2005) reveal that photos are many times used in the field of landscape evaluation studies in order to virtualize the scenery (Van Marwijk, 2008: 117). Therefore, virtual landscape as a concept used for the bird habitats suits to this context. Landscape attracts visitors and photographs can be used to stimulate interest towards the area (Kelly and Nankervis, 2001: 60). Therefore the photos in the power point presentation can be considered as such which can generate interest towards the bird habitats seen as virtual landscapes.

3.1.1. First-Stage Test of the Questionnaire in the Cognitive Interviewing Process

Pre-testing or field testing of a research instrument is relevant when a research instrument is constructed (Kumar, 2011: 24, Verhoeven and Van Baal, 2008). It has to be done before using the research tool for collecting data (Kumar, 2011: 158). Cresswell (2009) states that it is important to plan the pilot-testing of the research instrument. The pilot testing has established the content validity of the research instrument as well as it has improved its format, questions and scales. The number of the pre-testing test subjects has been indicated and their comments have been incorporated into the final revised instrument based on Creswell (2009). According to Vaske (2008: 173), pre-testing (also called pilot-testing) has at least three parts such as (1) involving experts like academics, sponsor organizations' representatives to get their advice, (2) involving potential test subjects who can be test subjects for the first-stage test, and (3) carrying out final checking to avoid major mistakes. These 3 parts within the MSc thesis have been done as it was mentioned above. The expert is represented by an academic who is a Dutch professor. Vaske (2008) argues that expert advice, pilot-test and final checking of the instrument are all aiming to acquire feedback related to the questionnaire's wording and design. Besides, it tests the validity, and the reliability of the questions. The questionnaire has to be refined based upon the input and the results of the preliminary and relevant steps before carrying out the major data gathering effort (Vaske, 2008: 175).

Therefore, before going into the lab to test the questions in the Leeuwenborch building, it is worth to develop draft version which goes through adequate "first-stage" tests (see Aday, 1996, and Chapter 2 of Willis, 2005 in Willis, 2005: 48). This first-stage test of the draft questionnaire took place from 17th till 21st March of 2012. During the pilot-testing procedure, altogether 9 people has been asked about their willingness to help by filling in the questionnaire and giving comments about it for making improvements. But only 7 people reacted for the on-line call which was done through the Facebook. The draft-questionnaire with three photos in this pilot-testing has been distributed by emails. Out of 7 reactions, there were only 5 test subjects who did contribution to the pilot-testing of the research instrument, but only 3 out of 5 test subjects have filled it in and gave comments. While 2 out of 5 did not fill it in, just gave comments. However one of these 2 test subjects thought that since it is pilot-testing, it does not have to be filled in, but this test subject asked questions which also gave contribution for refining the research instrument. The above mentioned 5 test subjects were all Dutch students, except one who is also Dutch, but has gotten the MSc degree not long time ago before the pilot-testing. In the first-stage testing period (also called first round of testing), mail questionnaire was sent to the test subjects. This is the most often used approach to gather data, but it has a weakness which is the very low response rate (Kumar, 2011: 147). This has been seen during the first round of testing of the MSc thesis' draft questionnaire.

The above mentioned process is similar to the cognitive interviewing which is used to evaluate questionnaires. It helps to identify such problems which otherwise would not be recognized (Willis, 2005: 3). Cognitive interviewing is characterised with modest sample size, since only some individuals are tested – normally they are between 5 and 15 in one interviewing round – before reviewing and interpreting of the findings are taken place. After the first round of testing, reviewing and modifying comes. The refined questionnaire generally again undertake the next round of testing, which is the main strength of the cognitive interviewing. It is called *iterative testing*. The cognitive testing or –interviewing which aims to develop better questions is characterised by flexible application, since it can be applied in more survey environments such as telephone, paper, internet administration or face-to-face (Willis, 2005: 7). In the iterative and final pilot-testing, face-to-face cognitive interviewing is applied for refining the questionnaire. These are presented in the sub-chapter 3.1.2.

3.1.2. Iterative Testing of the Research Instrument in the Cognitive Interviewing

1. After getting feedback related to the draft-questionnaire, it has been refined and thus it has become ready for the first iterative testing procedure. It was carried out firstly with a Dutch professor on 2nd April, 2012. This testing was about the Woodlark bird habitat seen as Woodlark landscape. The testing was successful, and the question of the test subject during the testing contributed to the improvement of the research instrument.

2. The second iterative testing was taken place in one of the Idealis buildings in Wageningen called Hovenstein on 5th April, 2012. It was around 40 minutes to fill in the questionnaire. The power point presentation about 10 bird habitats seen as virtual landscapes of the certain area was shown to which bird songs have been attached. Therefore it was possible to listen to the bird songs and watching the virtual landscapes representing the 10 bird habitats. The answers for the questions of the research instrument have been administered in a kind of "self-administered" way – not by the test subject, but by the MSc thesis writer. Cognitive interview can show when the questions do not have serious difficulties (Willis, 2005: 8). This has been proved by the second iterative testing of the questionnaire within the cognitive interviewing. But some new questions had to be added to the existing ones in order to add the visitor interests' direction towards birds as well to the questionnaire based interview. According to Willis (2005), the weakness of the cognitive interviewing is that it does not provide statistical proof of the better questions, therefore because of time limitation the final testing - cognitive interview - takes place only with one test subject (See Chapter 3.1.3.).

3.1.3. Final Testing of the Research Instrument in the Cognitive Interviewing

The final testing – cognitive interview – is planned according to the literature, but it is not done in the same way because of the already mentioned time limitation. The general characteristics of the cognitive interviewing are the following: (1.) Developing of an interview plan. (2.) Developing of cognitive testing protocol which includes the tested questions (target questions) as well as probe questions (Willis, 2005: 8), but in the MSc thesis' cognitive interview, there are no probe questions just target questions. The other reason why the MSc thesis' cognitive interview testing protocol does not include probe questions is the length of the questionnaire. To fill in the questionnaire is already around 45 minutes which has been measured with a potential test subject in the Hoevenstein building of the *Idealis* (see the second iterative testing in Chapter 3.1.2). (3.) Invitation has to be sent out for the calling the interviewee to the cognitive lab at the appointed time for participation in the interview (Willis, 2005: 7-8). The invitation letter, which was sent out on 18th April, 2012 to the interviewee, can be seen in Appendix 4.

Private administration (4.) of the questionnaire has to be done which means one-by-one interview. Besides, the cognitive interviewing techniques have to be applied such as think aloud during the interviewee tests the questionnaire (Willis, 2005: 8). In the MSc thesis, there are no probe questions, but think aloud is applied by encouraging the interviewee in the beginning to tell what is in her mind during testing. Furthermore, it is one-by-one interview. There is only one final tester of the questionnaire in the cognitive interview process. (5.) With the interviewee, consent has to have about recording the interview (video- or audio recording). Notes have to

be taken during the interviews which have to be reviewed together with the recorded material after the interview (Willis, 2005: 8). Consent to an interview can have, while consent to recording is not given. Written consent does have to have, except when the only contact is via email and written consent cannot be acquired through email in some manner (Willis, 2005: 149). But in the MSc thesis, the consent was not written down concerning neither the interview, nor the recording. (6.) When a team is involved, testing report has to be written. But a team was not involved, therefore testing report has not written in the MSc thesis. (7.) Modification in the questionnaire has to be done according to the findings. (8.) When there is enough time, it is good to conduct an additional testing round and after that the questionnaire can be re-evaluated (Willis, 2005: 8). But for this additional testing round, there was no available time in the MSc thesis time period. The data gathering had to be started in order to finalize the MSc thesis in time.

The subject of the cognitive interview should be part of the survey population related to demographic and other characteristics according to Willis (2005: 139). A supportive view says that it is important to carry out the pre-testing under real field conditions and with such people who belong to the study population (Kumar, 2011: 158). The interviewee who has been chosen for the final testing is a Dutch student who lives in Wageningen, but does not live in *Idealis* building.

The final testing of the questionnaire in the cognitive interviewing process of the MSc thesis, on one hand is partly built upon Willis (2005: 143) who says that after the interviewee arrives to the "lab", where the testing takes place, it is important to tell him/her the purposes and the procedures of the interview. On the other hand this final testing is partly built upon the interview protocol of Jacobs (2010) who gives similar instructions (see the altered version of this interview protocol in Appendix 3).

For the cognitive interview, 1 hour is reasonable (see Hess, Rothgeb and Nichols, 1998 in Willis, 2005: 143), however it can last from 15 minutes to 2 hours as well (Hunter and Hughes, 2003 in Willis, 2005: 143). In the MSc thesis, it is planned to be around 90 minutes. Willis (2005: 144) suggests 2:1 ratio between the time of cognitive interview and the field time. This means 1 hour cognitive interviewing will be used for testing the questionnaire which questionnaire otherwise takes ½ hour to fill in (Willis, 2005: 144). By measuring the time, the aim - 45 minutes to fill in the questionnaire – should be achieved with 90 minutes cognitive interviewing refers.

For the question, when testing of the questionnaire is finished, the answer is when all main problems are pointed out and satisfactorily revised. However a questionnaire could be tested on and on, but still having problems, since there is no perfect survey (Willis, 2005: 146). This has become visible in the questionnaire of the MSc thesis during the "interview sessions".

3.1.4. Indicators of the Questionnaire Based Interview Linked to Visitor Interests' Direction

General interest according to the newly established categorization

Would you like to live in this area because of the landscape?

... because of the birds?

Would you be willing to pay tax or private payment on the spot for living there in order to conserve this landscape?

Relaxation seeking interest according to the newly established categorization

Would you like to go to this area listen to bird songs in their natural environment?

Would you like to go to this area to have picnic?

Would you like to go to this area to relax mentally?

Would you like to spend your holiday at this landscape?

Would you be willing to pay tax or private payment for these things on the spot in order to conserve this landscape?

Recreation seeking interest according to the newly established categorization

Would you like to go to this area to walk?

... to cycle?

... to do physical exercise?

Would you like to take part in outdoor activities e.g. dog walking on leash in this area?

Would you be willing to pay tax or private payment for these things on the spot in order to conserve this landscape?

Amazement seeking interest according to the newly established categorization

Would you like to go there to enjoy watching of birds when they sit in their nest or when they fly out from the nest?

Would you like to go there to enjoy how birds feed their chicks and themselves?

Would you like to go there to enjoy how high and fast birds fly?

Would you like to go there to enjoy how large or tiny the trees or bushes or grass or how shallow or deep is the pond of this landscape?

Would you be willing to pay tax or private payment for these things on the spot in order to conserve the landscape?

Learning seeking interest according to the newly established categorization

Would you like to go to this area to learn about its landscape?

Would you like to go to this area to study the smell of the flowers?

... to learn about its birds?

... to learn about its history?

Would you be willing to pay tax or private payment for these things on the spot in order to conserve this landscape?

Scientific interest according to the newly established categorization

Would you like to go to this area to collect data or do observation related to its plants?

... to collect data or do observation related to its birds?

... to collect data or do observation related to your study programme?

... to do experiment?

Would you be willing to pay tax or private payment for these things on the spot in order to conserve this landscape?

Creativity interest according to the newly established categorization

| Would you like to go there to use your imagination concerning landscape architecture or planning? |
| Would you like to go there to use your imagination concerning organizing public events? |
| Would you like to gain inspiration on this area e.g. writing poem(s), painting picture(s) about its landscapes? |
| Would you like to gain inspiration on this area e.g. writing poem(s), painting picture(s) about its birds? |
| Would you be willing to pay tax or private payment for these things on the spot in order to conserve this landscape? |

Economic interest according to the newly established categorization

Would you be willing to earn money by giving bird watching tour as part of environmental education?

Would you be willing to earn money by doing research at this area to conserve birds?

Would you be willing to earn money by building an ecologically accepted small house at this area?

Would you be willing to earn money by conserving this landscape?

Would you be willing to earn money by developing a visitor management plan?

Other interest according to the newly established categorization

Would you like to go to this area to have story to tell to people?

Would you like to go to this area to seek new landscape than what is in your ordinary environment?

Would you like to go to this area to feed birds in order to increase their activity level?

Would you like to go to this area to find excitement?

Would you be willing to pay tax or private payment for these things on the spot in order to conserve this landscape?

3.2. Carrying out the Research: Sampling, Data Gathering and Data Analysis

The population are the Dutch students living in Idealis buildings in Wageningen. The "Dutch" has been chosen, since they appreciate the green environment. For example, the motto of the Alterra - "your environment is our concern" (Alterra, 2012) - confirms its importance. "Students" have been chosen because of their easy accessibility, and also because the MSc thesis writer is herself a student. Besides, students are considered to have more time for participating in research.

3.2.1. Sampling

In the convenience sample the test subjects are chosen depending on their convenience as well as on their availability (Babbie, 1990 in Creswell, 2009). The test subjects were approached according to their availability which means mostly when they stayed in the territory of the *Idealis* buildings. But there were cases when the test subjects were found in the Leeuwenborch building of the WUR or simply through the Facebook chatting. The sample is composed from the Dutch student population of the *Idealis* buildings in Wageningen. It is a kind of convenience sample because the Dutch students had to be approachable in order to ask them about their willingness to participate in the research.

According to Kumar (2011: 206), there are five types of non-random/non-probability sampling designs which are used in quantitative research. Out of these sampling techniques, the accidental sampling is applied mostly in the MSc thesis which is built upon the convenience of approaching the sampling population. This sampling method does not consider obvious or visible characteristics of the test subjects like the quota sampling does. In the accidental technique, the researcher stops gathering of data when s(he) reaches the required test subjects' number which has been decided to have in his/her sample. It is characterised with almost the same advantages and disadvantages like the quota sampling. But it is possible that not everybody who is contacted will be part of the sample since the sample taking is not based on visible characteristics (Kumar, 2011: 207). In the case of the MSc thesis, none of the screening questions can be found out by only looking at the students. However, the nationality partly is visible somehow, but there were cases when the approached people were not Dutch. Being a student is also not always visible, since there were such approached people who lives in *Idealis* buildings, but not students. The other question which was asked from the test subjects – do you live in one of the Idealis buildings in Wageningen – also could not be answered simply by looking at people. But there were cases when people were at the *Idealis* building – looking as permanent tenants, but they were just there. Besides, when students have been asked in the Leeuwenborch building to participate, in that case it was totally invisible, just like through the Facebook chatting.

The sample technique in the MSc thesis is not merely accidental, but it has quota sampling characteristics as well. Kumar (2011) states that quota sampling technique is characterised by the ease of access concerning how the researcher approaches the

population. In the case of quota sampling design, there are some visible characteristics like gender related to the study population. Besides, the sample is selected out of a location which is convenient for the person who does the research. The sampling process ends when the required number of test subjects has been achieved. This is the quota. One of the advantages of this sampling technique is its least expensiveness related to the manner of sample selecting. Other advantages are that the researcher does not need to have the number of the total elements, and the location of the elements. The success of containing such test subjects who are needed is guaranteed. The disadvantages of the quota sampling are that it is not probability sampling and the results cannot be generalized to the total sample population. It is possible to make the sample to be more representative in a way that it is selected from more locations where the test subjects who are in the interest of the study are likely to be accessible (Kumar, 2011: 206-207). In the MSc thesis, the *Idealis* buildings are chosen, since these are approachable and familiar for the MSc thesis writer. However the Leeuwenborch building was also used to recruit possible test subjects. The quota in current case is 30 test subjects. The test subjects' characteristics can be found in Appendix 7. They are from the Asserpark, Dijkgraaf, Droevendaal, Marijkeweg, Nobelweg, Hoevestein, Vijzelstraat provided by the *Idealis* housing company. The advantage of the quota sampling is beneficial at the current case, since the total number of Dutch students living in *Idealis* buildings changes and their total number does not have. The reason of these changes can be the moving out and in, being abroad for internship or for other purpose, legal- or illegal sub-renting Etc.

3.2.2. Data Gathering

Screening questions have been asked from the test subjects in order to have the right sample (see Flyer, Appendix 5). The screening questions have made it possible to invite only those test subjects to the "Leeuwenborch lab" who are Dutch students, having Dutch ID or Dutch passport, and who live in one of the Idealis buildings in Wageningen. The test subjects were recruited in Wageningen in most cases in front of the buildings' corridor. However, at the Marijkeweg one test subject was found in front of the building while the test subject was preparing to go somewhere by bike. The Nobelweg also has been approached where many PhD students have been found, but only some of them are Dutch. One of them was willing to participate, but the other from the Nobelweg asked email address in case something would happen. In this latter case, the appointment has been cancelled because of lots of work which the potential test subject has to do. But in the email with the explanation, she somehow showed interest by asking more details preferably in writing. That was the time (after recruiting at the Nobelweg) when the decision has been made concerning not to give email address to potential test subjects beforehand. It has to happen just after the interview in order not to give them the opportunity to refuse the appointment. After this time, when the potential test subject wanted to get the email address, the answer was given that if somebody would like to know the result, after

participation, the email address will be given. This potential test subject, who seemed to be still interested in the research according to the email, has been searched back[6], but the participation has been refused at that time.

The email from this above mentioned test subject pointed out that it is strange to ask these questions in the evening after ringing the bell. This comment, however in an altered way, was told not only one time. Once, the strangeness of the screening questions came after taking part in the research. The test subject noted that through the Facebook chatting he did not know where these questions lead, but he came to participate. Additionally, a student has also advised me to use flyers. She emphasised that maybe I seem to be *"strange"* for asking the screening questions personally. Furthermore, a researcher at the Alterra pointed out that the question about having Dutch passport or Dutch ID is like a question from the Interpol such as; is it allowed you to stay in the Netherlands? Therefore, I have started to use flyers as well. Flyer for recruiting (see Appendix 5) has been used from 2nd May 2012 in order not to be so official. Screening questions have been also added and altered. But the sample has stayed the same. The flyers were placed in the FORUM- and in the Leeuwenborch building of Wageningen University, and out of its Research Centre in the GAIA and LUMEN buildings (Alterra), as well as in the Radix building. Besides, in some of the Idealis buildings such as Asserpark, Dijkgraaf, Hoeveinstein. From 10th May, 2012, Facebook Event (see Appendix 6) has been also used in order to get test subjects.

Since Dutch students are in the target group of the MSc thesis, therefore weekends were not planned to include as recruiting time, since most of the Dutch students go home to their parents. -> But this criterion has been altered. One Saturday in the Droevendaal has proved that this assumption was not correct. There were many students at the Droevendaal on that Saturday (28 April, 2012) when the first recruiting took place in that area of *Idealis* housing company. Many appointments have been made on that Saturday.

From Monday till Friday, data gathering has been taken place in pre-scheduled hours of the day depending on the appointments made. -> But this criterion has been adjusted, since the Leeuwenborch building is open also during the Saturdays (except national holidays). Therefore the possible data gathering time is defined according to the opening hours of the Leeuwenborch building of the Wageningen University. Data were gathered on weekdays except in the case of a PhD student who had time for this purpose only during the weekend.

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[6] Conclusion, it is better not to give email address to the test subject before the participation. However, an exemption has been taken concerning a girl at the Droevendaal who firstly was not willing to come because of sport activity since its time was unknown. But this possible test subject gave her telephone number (just in case – she still would be needed). Therefore, when the recruiting second time took place in Droevendaal, this girl has been approached again and she was willing to participate. But on the day of the questionnaire based interview, an email has been sent that there is other obligation to do. She did not participate finally.

In the case of face-to-face personal survey, the instructor goes to the home of the test subject and gives the questionnaire as well as writes down the answers (Verhoeven and Van Baal, 2008: 99). But in the MSc thesis the instructor and the test subjects made appointment and the test subjects had to come to the Leeuwenborch building for the questionnaire based interview. To a possible test subject, it was also named as "Leeuwenborch based" research.

Data were collected in the Leeuwenborch building in the month of April and May of 2012. First day of data gathering was on 24th April, 2012. Last day of data gathering was 23rd May, 2012. This refers to the survey period, but there was an interview based questionnaire also after the survey period which has not been included in the analysed dataset. Verhoeven and Van Baal (2008) states that it is important to take care of holidays in order to get maximum response. Therefore in the case of the MSc thesis, the maximum end of survey period was defined according to the end of the 6th period in the Wageningen University's agenda. The end of the survey period therefore was planned to be 8th July, 2012, but it has finished earlier. The last test subject in the within the survey period has been recruited via Facebook chatting and was among the invited people by the Facebook Event. But he did not react just after "personal" approaching via Facebook chatting. The interesting characteristic of this test subject is that he moved into the *Idealis* building just on 22nd of May.

3.2.3. Data Analysis

Quantitative analysis is many times used in the field of survey research. In survey research, the test subjects have to choose from limited number of answers, since it is structured data collection. The basis for the dataset is the answers provided by the test subjects (Verhoeven and Van Baal, 2008: 98). In the MSc thesis, the test subjects had to say yes or no for most of the questions, however there were some questions for which they could tell more than that (e.g. questions about educational background, willingness to take part in similar research in the future, interest in result). But only the yes/no questions have been part of the analysis. The collected data have been entered into the excel file during the questionnaire based interviews. After data gathering period, statistical analysis has been done. The gathered data have been converted into numerical data and were analysed statistically by the help of the Microsoft Excel Program. The excel file named as For test subjects _ Questionnaire for MSc thesis research.xlsx contains more excel sheets, but one is hidden. Out of these excel sheets, 1 sheet is explanation about the codes and about the exact places of the interviews. The reason of hiding one sheet with the responses of the test subject is because the correctness of gathered data from this test subject can be questioned. The power point presentation's more bird habitat photos have been switched almost together and very fast by the test subject by mistake. The photos have been mixed according to my hunch. The data from this test subject was spoiled immediately by the doubt around the correctness of the data. Besides, the test subject was still sick like during the recruiting and 2 times had gone out from the

office during the data gathering. Without counting the hidden sheet and the explanation in the dataset, there are 30 excel sheets representing the 30 test subjects. Another excel file called Entered data _ testing period _ according to VISITOR INTERESTS.xlsx contains the responses organized according to the visitor interests' direction. Since there are 9 main questions representing the 9 visitor interests, therefore there are 9 excel sheets in this file mentioned above. For coding the entered data the following code system was used:

y = yes n = no In original file – responses given in this way for yes or no questions. Y – 0 N - 1 In entered data file (Coding).

Box 1.: Code System

Each visitor interest of every test subject has been counted separately by summing up the "yes" and/or "no" answers for the questions given referring to the indicators of the visitor interests. These indictors have been defined by formulating questions about the visitor interests mostly based on the literature review. The "yes" responses have been coded with "0", while the "no" responses have been coded with "1". When the number of "0" was more than the number of "1" concerning the visitor interest's defined indicators, it refers to that the visitor interest does exist concerning the test subject towards the bird habitat seen as virtual landscape.

An excel file with the codes has been created called Entered data _ testing period _ according to BIRD HABITATS.xlsx. This file summarizes the visitor interests of the test subjects towards bird habitats seen as virtual landscapes (also called virtual landscapes). But it is organized according to the bird habitats. Therefore, 10 excel sheets in this file represent the bird habitats seen as virtual landscapes on the power point presentation. Another file shows the visitor interests towards birds organized according to the bird habitats of the certain area.

Two new excel files have been built up for the ANOVA Single Factor Analysis. These are named as Recoded Dataset for ANOVA by visitor interests.xlsx and Recoded Dataset for ANOVA by bird habitats.xlsx. A kind of problem had to be solved before this statistical analysis because of the coding (0="Yes", 1="No") done in the beginning. In order to get for example the percentage of arithmetic means (the averages), the coding have to be the other way around. This has been done by changing the 0 into 1, and the 1 into 0 in the copied data tables which have become part of the ANOVA Single Factor analysis. Then data analysis has been carried out in the Microsoft Excel by this mentioned method. Several input have been given into the ANOVA: Single Factor "window" like 0,05 as Alpha, the whole table gathering all the answers of the 30 test subjects together with the name of visitor interests or the name of virtual landscapes has been used as input range. But the column of student numbers has

not been included in the input range. The P-value has been analysed which has shown the existence (if P-value is less than 0,05) of the most important visitor interest or the most important bird habitats seen as virtual landscapes.

3.3. Expectation

Kumar (2011) states that hypotheses can bring clarity and focus to the research problem. These show to the researcher what kind of information has to gather, and by doing so they provide larger focus. But it is not necessary for a study. It is possible to conduct research without having hypotheses. (Kumar, 2011: 81-82). Verhoeven and Van Baal (2008) states that researchers probably have expectations so called assumptions about the research before it starts. These expectations can be written down in hypotheses, but these have to be underpinned by proper arguments. That is the reason why literature, earlier research results as well as theories are used on a topic (Verhoeven and Van Baal, 2008: 75). In the MSc thesis, the result cannot be generalized to the whole study population because of this characteristic of the quota sampling (see 3.2.1.) which has been also used next to the accidental sampling. Both belong to the convenience sampling. According to Verhoeven and Van Baal (2008: 76) the results are significant when they are not by coincidence. When the quantitative analysis points out that the relationship which has been found is not coincidence. In the MSc thesis, the expectation is the following: different visitor interests belong to different bird habitats seen as virtual landscapes.

4. Results

4.1. Result of the Final Testing of the Questionnaire in the Cognitive Interview

According to the literature, when there are no serious difficulties with the questions, this is considered itself as a finding. This provides enough assurance that the researcher can start to collect data by the survey with enough confidence (Willis, 2005: 7-8). This is what is proved by the final testing of the questionnaire based interview in the cognitive interview process. However it was carried out differently as it was planned because of the sickness of the final tester. The cognitive interview, therefore, taken place with another the interviewee.

I read the email in the library about the cancellation of the agreed cognitive interview (personal communication with anonymous person, 19 April, 2012). Therefore I asked two Dutch girls and one of them does not live in Wageningen, but the other does and could come for testing. The final testing of the research instrument in the cognitive interview was successful. It was planned to take around 90 minutes, but it was only 56 minutes. The interviewee was satisfied because of the unexpected shortness of the interview. Based on Willis (2005: 144) who discusses about the 2:1 ratio between the field time and the cognitive interview time, therefore the 56 minutes cognitive interview result, counting by this approach, the questionnaire based interview should be only 28 minutes to fill in. I argue that it is a desirable time, but the experience itself will speak. The reason for telling this is that the questionnaire has been revised again based upon the final testing in the cognitive interview and also based upon the intuition of the MSc thesis writer.

4.2. Characteristics of the Test subjects in the Sample

Out of 30 Dutch students who have been recruited by asking the screening questions, there were 19 male students and 11 female students. Out of these Dutch students in the sample, there were 29 students who study at the Wageningen University and only one of them studies at the Stoas Hogeschool. Most of the students are MSc students (15 out of 30), however many of them are BSc students (13 out of 30), while only 2 students are PhD students in the sample. However, one of them mentioned his PhD defence will be within 2 months. These PhD students get more attention in this sub-chapter, since they took their very precious time to participate in a MSc thesis research. One of the PhD students does his research at the Experimental Plant Sciences Educational School (EPS). The questionnaire based interview with this PhD student took 34 minutes and started at 7:45 AM in the Leeuwenborch building's "lab" which was always the same place – Agricultural Economics and Rural Policy Group (AEP) corridor, room 2105 – except two cases; 10th and 11th when the spoiled data is not taken into account. In these two latter cases, the questionnaire based interview took place in one of the PC room of the Leeuwenborch building. This EPS PhD student was recruited on one of the weekdays by ringing the doorbell in the evening hours at the Nobelweg. This PhD student immediately said yes to this request. The other PhD

student who deals with cell biology was recruited in the weekend at the Droevendaal and not come immediately, but the appointment has been made 3 weeks in advance the data gathering from this test subject took place on Saturday at the Leeuwenborch building's AEP corridor. In this case, it started at 12:18 pm and took 51 minutes. Otherwise, the shortest questionnaire based interview was with the EPS PhD student (34 minutes), and the longest was with the Forest and Nature Conservation BSc student. However, this latter case, has been not analysed because it is spoiled data. The questionnaire based interview two times has been stopped, since the test subject had to go out to another place. Once, the test subject got a phone call as well. But it is important to highlight the helpfulness of this test subject, since the data gathering has been done during the sickness of the test subject. The questionnaire based interview took 73 minutes with that test subject, but it was not in vain. The power point photos was switched too fast at a certain point which has caused doubting about the correctness of the answers related to that test subject. But this was the point when the MSc thesis writer herself started to switch between the slides of bird habitats seen as virtual landscapes. The other longest questionnaire based interview was with a BSc student who studies about Molecular Life Sciences. This data gathering took 71 minutes. There were two Leisure, Tourism and Environment MSc students as well among the test subjects in the sample. They were recruited via Facebook via on-line chatting. With one of them, the data gathering was 45 minutes and with the other it was 57 minutes. For the question about interest in future research, 18 Dutch students said yes, while 10 said no and 2 test subjects did not give answer for this question. Out of 30 Dutch students, 27 are interested in the result of the MSc thesis, but 2 out of 30 test subjects are not interested in it. 1 test subject's answer is missing concerning this question. The Dutch students composition related to their residence is the following: 5 live in Asserpark, 10 live in Droevendaal, 6 live in Hoevenstein, 3 in Dijkgraaf, 2 in Nobelweg, while other 2 Dutch students live in Marijkeweg, and 2 in Vijzelstraat. Besides, the location of the elements do not have to have according to Kumar (2011: 206-207) which is one of the characteristics of the quota sample. Further details about the characteristics of the test subjects and about the questionnaire based interview can be found in sub-chapter 3.1.4.

4.3. Result of the Questionnaire based Interviews

The quantitative data makes it possible for the researchers to interpret results statistically. Researchers can make interpretations out of the themes or patterns which emerge out of the data collection (Chreswell, 2003: 16). Clustered columns, tables are produced out of the dataset to analyse the responses concerning visitor interests' direction towards bird habitats seen as virtual landscapes, and towards birds. Altogether, 30 test subjects participated in the MSc thesis as test subjects.

For analysing the results the test subjects are taken into account as a group and not as individuals. Firstly, the visitor interests' direction is pointed out towards bird habitats seen as virtual landscapes of the certain area. Secondly, the visitor interests'

direction is pointed out towards the certain area seen as a whole. Its name has become unhidden in the conclusion of the MSc thesis. And finally the visitor interests' direction towards birds is also under research, however not done so comprehensively than towards bird habitats.

4.3.1. First Sub-Research Question Analysed towards Bird Habitats seen as Virtual Landscapes

This sub-research question is about how common are the defined visitor interests according to their direction related to bird habitats seen as virtual landscapes which would attract visitors to the certain area. Before, answering for this question it is important to explain how the visitor interests according to their direction have been established. The advice related to the idea has been given by Gerzson Komádi, but there is no scientific article about it, therefore the MSc thesis is exploratory research. Some example of visitor interests according to their direction have been given by him such as general interest, scientific interest, and which is about delighting in birds or in their habitats. But then more categories have been established by the same line of thoughts. This categorization is used for gathering under this umbrella the existing visitor motivations used in the theoretical framework. Altogether 9 visitor interests have been identified according to their direction which are the following: general interest, relaxation seeking interest, recreation seeking interest, amazement seeking interest, learning seeking interest, scientific interest, creativity interest, economic interest, other interest. To each of them, indicators - in question form - have been established and attached for which test subjects had to give their answers ("yes" or "no"). By analysing the responses, it is possible to draw conclusion related e.g. to the existence, not existence of visitor interests towards bird habitats seen as virtual landscapes of the certain area Etc.

4.3.1.1. Answer for the 1st sub-Research Question by using the ANOVA-Tables per Bird Habitat seen as Virtual Landscape and also by an Abstract Categorization

The visitor interests according to their direction can be analysed by an abstract categorization called Exist, Not Exist and Cannot be Judged. These are based on percentages, but those are not shown, but are overlapped with colours Green/Red/Orange (see Table 9). The 100% includes the "Yes" and "No" responses which are given related to one visitor interest. There are 9 visitor interests according to their direction, and there are 10 bird habitats seen as virtual landscapes in the certain area. But the certain area is also included in the Table 9 as an individual category. Each green or red or orange box representing the Exist/Not Exist/Cannot be Judged category referring to a certain percentage out of 100% based on the given "Yes" responses.

Let us take an example with the general interest towards an imagined bird habitat called "A" seen as virtual landscape. For example, for the general interest towards bird habitat "A" seen as virtual landscape, X% of the test subjects said "Yes", and 100%-X%

said "No". The general interest gets the "Exist" as a label showing this by the green field in Table 9, if X is more than 50%. The general interest gets the category of "Not Exist" as a label showing this by the red field in Table 9, if X is less than 50%. The general interest get the category of "Cannot be Judged" as a label showing this by the orange field in Table 9, if X is equal with 50%. In this latter case, it is not possible to reveal the existence or not-existence of the visitor interest, since both of them are 50% - 50%. However, it is not problem concerning the visitor interests according to their direction towards the certain area as a whole considering all its bird habitats seen as virtual landscapes together because each visitor interest towards the certain area can be judged (see last row of Table 9).

Table 9: Visitor Interests' Direction towards Bird Habitats seen as Virtual Landscapes based on An Abstract Categorization

	General Interest	Relaxation Seeking Interest	Recreation Seeking Interest	Amazement Seeking Interest	Learning Seeking Interest	Scientific Interest	Creativity Interest	Economic Interest	Other Interest
Black woodpecker landscape	Exist	Exist	Exist	Cannot Be Judged	Exist	Not Exist	Not Exist	Exist	Exist
Honey Buzzard landscape	Exist	Exist	Exist	Cannot Be Judged	Exist	Not Exist	Not Exist	Exist	Exist
Wryneck landscape	Exist	Exist	Exist	Exist	Exist	Exist	Not Exist	Exist	Exist
Nightjar landscape	Exist	Exist	Exist	Not Exist	Exist	Not Exist	Not Exist	Exist	Exist
Woodlark landscape	Exist	Exist	Exist	Not Exist	Exist	Not Exist	Not Exist	Exist	Exist
Stonechat landscape	Exist	Exist	Exist	Not Exist	Exist	Not Exist	Not Exist	Exist	Cannot Be Judged
Wheatear landscape	Not Exist	Cannot Be Judged	Exist	Not Exist	Exist	Not Exist	Not Exist	Exist	Not Exist
Tawny Pipit landscape	Not Exist	Exist	Exist	Not Exist	Exist	Not Exist	Not Exist	Exist	Cannot Be Judged
Red-backed Shrike landscape	Exist	Exist	Exist	Not Exist	Exist	Not Exist	Not Exist	Cannot Be Judged	Cannot Be Judged
Kingfisher landscape	Exist	Exist	Exist	Exist	Exist	Not Exist	Not Exist	Cannot Be Judged	Exist
Total The Certain Area	Exist	Exist	Exist	Not Exist	Exist	Not Exist	Not Exist	Exist	Exist

The analysis could be done also by dealing with the percentages which are hidden behind the green/red/orange fields in Table 9. By doing so, the answer has become more detailed related to the 1st sub-research question, but for this purpose the ANOVA-Tables' arithmetic means might be also used (see Appendix 8), however those ANOVA-Tables were created later. But their averages (arithmetic means) are the same with the result which have been counted by using the MS Excel file containing the data gathered during the questionnaire based interviews. These are behind the green/red/orange fields.

The same structure will be followed in the coming analysis in this sub-chapter 4.3.1.1. Before showing the figures about the column diagram based on the "YES" answers (arithmetic means of ANOVA-table 1-10), the result will be presented based on the

abstract categorization called Exit/Not Exist/Cannot be Judged. *But after the same figures, the most important visitor interest will be presented according to specific bird habitat seen as virtual landscape under analysis based on the ANOVA-table. These will be presented with Italic letters.* However, the constructed percentages by simple counting related to this analysis - giving the result of Exist/Not Exist/Cannot be Judged abstract categorization - *are the same with the arithmetic means of ANOVA-tables. But still there is difference, since according to the ANOVA-tables, each visitor interest exists towards bird habitats seen as virtual landscapes.* But when the percentages seen by the Exist/Not Exist/Cannot be Judged categorization, then not every visitor interest does exist. The figures are based on the "Yes" answers which refer to the percentages behind the abstract categorization. *But the ANOVA-tables show the same percentages. The ANOVA Single Factor analysis has been done by using Alpha 0,05.*

Towards the certain area's Black Woodpecker bird habitat seen as virtual landscape (see Figure 1), based on the abstract categorization called Exist/Not Exist/Cannot be Judged 6 visitor interests do exist according to their direction such as general interest (67%), relaxation seeking interest (90%), recreation seeking interest (87%), learning seeking interest (57%), economic interest (63%), other interest (53%). The scientific interest (40%), the creativity interest (27%) do not exist towards the certain area's Black Woodpecker bird habitat seen as virtual landscape. Concerning the amazement seeking interest, its existence (50%) or not existence (50%) cannot be judged towards this bird habitat seen as virtual landscape related to the certain area. The meaning of these percentages that how many test subjects would go to that bird habitat as visitors induced by these visitor interests towards Black Woodpecker landscape of the certain area.
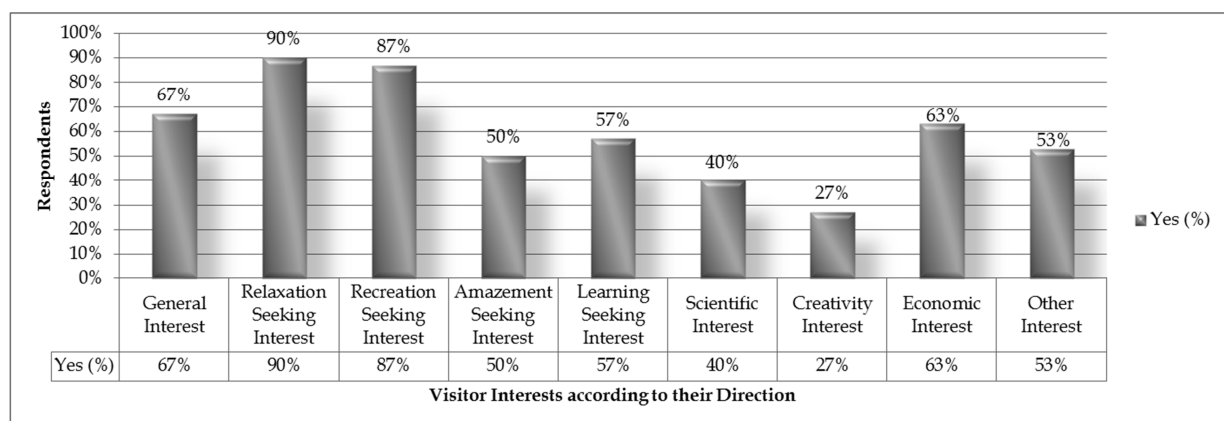
Figure 1: Visitor Interests' Direction towards Black Woodpecker Landscape based on the "Yes" answers (see Arithmetic Means of ANOVA-table 1 in Appendix 8)

The most important visitor interest towards the Black Woodpecker Landscape based on the arithmetic means of the ANOVA-Table 1 is the relaxation seeking interest, since it has the highest percentage (90%) among the visitor interests. The P-value related to the relaxation seeking interest towards Black Woodpecker Landscape of the certain area is less than 0,05, therefore the difference among visitor interests towards the

Black Woodpecker landscape is significant. The 90% concerning the relaxation seeking interest means that the relaxation seeking interest as the most important visitor interest would attract the highest percentage of test subjects as visitors to the Black Woodpecker bird habitat seen as virtual landscape of the certain area. The relaxation seeking interest has the strongest attracting power among the visitor interests towards the Black Woodpecker bird habitat in the certain area.

Towards the certain area's Honey Buzzard bird habitat seen as virtual landscape (see Figure 2), 6 visitor interests do exist according to their direction. The existing visitor interests towards Honey Buzzard landscape are the following such as general interest (73%), relaxation seeking interest (83%), recreation seeking interest (87%), learning seeking interest (57%), economic interest (60%), and other interest (53%). The non-existing visitor interests towards Honey Buzzard landscape are the following; scientific interest (47%), and creativity interest (17%). The amazement seeking interest cannot be judged concerning its existence (50%) or non-existence (50%) related to the Honey Buzzard landscape of the certain area. Based on the "Yes" answers which is hidden behind the Exist/Not Exist/Cannot be Judged abstract categorization, the recreation seeking interest is the highest towards Honey Buzzard landscape.

Figure 2: Visitor Interests' Direction towards Honey Buzzard Landscape based on the "Yes" answers (see Arithmetic Means of ANOVA-table 2 in Appendix 8)

This above mentioned result is equal with the result of the arithmetic means related to the Honey Buzzard Landscape (See ANOVA-table 2). The most relevant visitor interest towards the Honey Buzzard Landscape is the recreation seeking interest, since its average (arithmetic mean) is the highest among the visitor interests towards this landscape. The meaning of the 87% related to the recreation seeking interest is that it attracts the highest number of test subjects to the Honey Buzzard landscape of the certain area. The P-value is less than 0,05 which means that there is significant difference among visitor interests towards Honey Buzzard landscape in the certain area. The recreation seeking interest does have the strongest attracting power among the visitor interests towards Honey Buzzard bird habitat of the certain area.

Towards the Wryneck landscape in the certain area (see Figure 3) which is representing the Wryneck bird habitat, 8 visitor interests do exist such as general interest (60%), relaxation seeking interest (87%), recreation seeking interest (97%), amazement seeking interest (57%), learning seeking interest (73%), scientific interest (53%), economic interest (60%) and other interest (63%). Only the creativity interest (30%) does not exist related to the certain area's Wryneck bird habitat seen as virtual landscape. The highest percentage is 97% which refers to that recreation seeking interest would attract the highest number of test subjects as visitors to the Wryneck landscape in the certain area.

Figure 3: Visitor Interests' Direction towards Wryneck Landscape based on the "Yes" answers (see Arithmetic Means of ANOVA-table 3 in Appendix 8)

The Arithmetic Means of the ANOVA-table 3 tells the same, just approach it from a different aspect. The recreation seeking interest is the most important visitor interests towards the Wryneck bird habitat seen as virtual landscape in the certain area. Its percentage is 97%, the highest among the visitor interests which means that the recreation seeking interest would attract 97% of them as visitors to the Wryneck landscape of the certain area (see ANOVA-table 3). The P-value is less than 0,05 which means that there is significant difference among visitor interests towards this landscape of the certain area. This visitor interest does have the strongest attracting power related to the Wryneck landscape.

Towards the Nightjar bird habitat seen as Nightjar landscape of the certain area (see Figure 4), there are 6 visitor interests according to their direction which do exist such as general interest (70%), relaxation seeking interest (90%), recreation seeking interest (87%), learning seeking interest (60%), economic interest (57%), other interest (57%). Amazement seeking interest (47%), scientific interest (40%), creativity interest (37%) do not exist towards the Nightjar bird habitat seen as Nightjar landscape related to the certain area. The relaxation seeking interest's 90% means that it would attract the highest amount of test subjects as visitors to the Nightjar landscape of the certain area.

Figure 4: Visitor Interests' Direction towards Nightjar Landscape based on the "Yes" answers (see Arithmetic Means of ANOVA-table 4 in Appendix 8)

The most relevant visitor interest towards the Nightjar landscape is the relaxation seeking interest with its 90% (see ANOVA-table 4). The P-value is less than 0,05 which means that there is significant difference among visitor interests towards Nightjar bird habitat seen as virtual landscape in the certain area. The relaxation seeking interest does have the strongest attracting power among the visitor interests towards Nightjar landscape which means that this visitor interest would attract the highest number of test subjects as visitors to the Nightjar landscape of the certain area.

Towards the Woodlark bird habitat seen as virtual landscape of the certain area (see Figure 5), there are 6 existing visitor interests which are the following: general interest (60%), relaxation seeking interest (87%), recreation seeking interest (80%), learning seeking interest (57%), economic interest (57%), and other interest (53%). There are 3 non-existing visitor interests related to the Woodlark landscape of the certain area. These are the following: amazement seeking interest (47%), scientific interest (40%), and creativity interest (27%). These percentages show how many test subjects would be attracted as visitors to the Woodlark landscape of the certain area. The relaxation seeking interest would attract the highest amount of test subjects as visitors to its Woodlark landscape.

Figure 5: Visitor Interests' Direction towards Woodlark Landscape based on the "Yes" answers (see Arithmetic Means of ANOVA-table 5 in Appendix 8)

The most relevant visitor interest is the relaxation seeking interest towards Woodlark landscape of the certain area (see ANOVA-table 5). Its percentage is the highest (87%) among the visitor interests which means that it would attract the highest number of test subjects as visitors to the Woodlark landscape of the certain area. The P-value concerning the Woodlark landscape is less than 0,05 which means that there is significant difference among the visitor interests concerning its case. The relaxation seeking interest has the strongest attracting power towards the Woodlark landscape.

Towards the Stonechat bird habitat seen as virtual landscape of the certain area (see Figure 6), there are 5 visitor interests which exist such as general interest (57%), relaxation seeking interest (80%), recreation seeking interest (83%), learning seeking interest (60%), economic interest (60%). Certain visitor interests, however, do not exist towards the Stonechat landscape of the certain area and these are the following; amazement seeking interest (43%), scientific interest (37%), creativity interest (23%). While there is a visitor interest called other interest about which it cannot be judged that it exists (50%) or does not exist (50%) towards the Stonechat bird habitat seen as virtual landscape. These percentages again show the amount of test subjects who would be attracted to the Stonechat Landscape of the certain area as visitors.

|	General Interest	Relaxation Seeking Interest	Recreation Seeking Interest	Amazement Seeking Interest	Learning Seeking Interest	Scientific Interest	Creativity Interest	Economic Interest	Other Interest
Yes (%)	57%	80%	83%	43%	60%	37%	23%	60%	50%

Visitor Interests according to their Direction
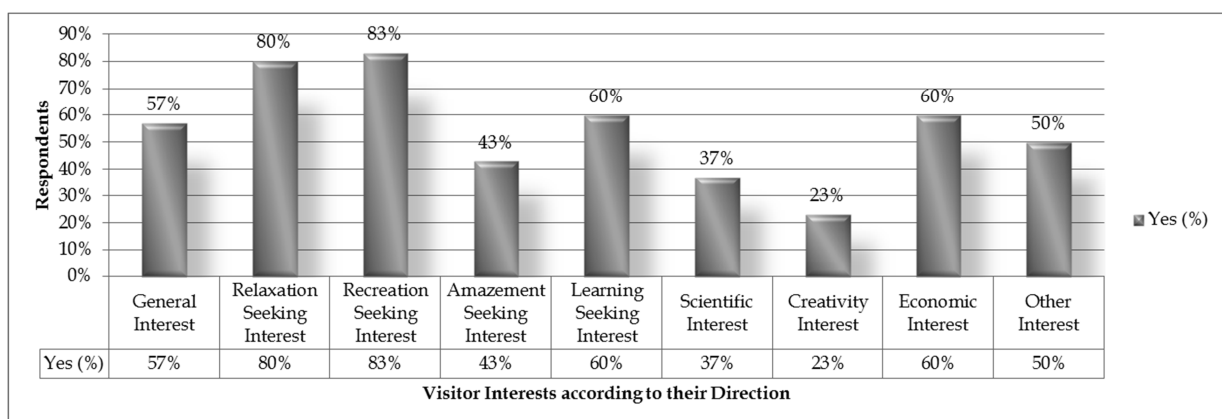
Figure 6: Visitor Interests' Direction towards Stonechat Landscape based on the "Yes" answers (see Arithmetic Means of ANOVA-table 6 in Appendix 8)

The recreation seeking interest is the most important visitor interest among the visitor interests which means that it would attract the highest percentage of the test subjects (83%) as visitors to the Stonechat bird habitat of the certain area (see ANOVA-table 6). The P-value is less than 0,05 in the case of Stonechat Landscape as well which means that there is significant difference among the visitor interests towards this bird habitat seen as virtual landscape of the certain area. The recreation seeking interest does have the largest attracting power towards the Stonechat bird habitat seen as virtual landscape of the certain area.

Towards the Wheatear bird habitat seen as virtual landscape of the certain area (see Figure 7), there are 3 visitor interests which exist and these are the following; recreation seeking interest (63%), learning seeking interest (57%), economic interest

(57%). There are 5 visitor interests which do not exist related to the Wheatear landscape and these are the following such as general interest (27%), amazement seeking interest (37%), scientific interest (37%), creativity interest (23%), and other interest (33%). The relaxation seeking interest cannot be judged that it exists (50%) or does not exist (50%) related to the Wheatear bird habitat seen as virtual landscape of the certain area. These percentages refer to how many test subjects would be attracted as visitors to the certain area by the visitor interests according to their direction.
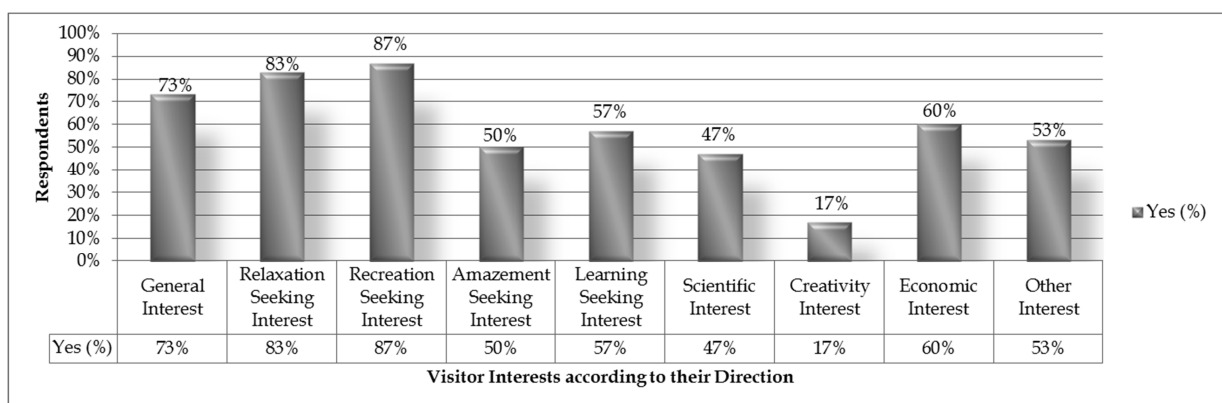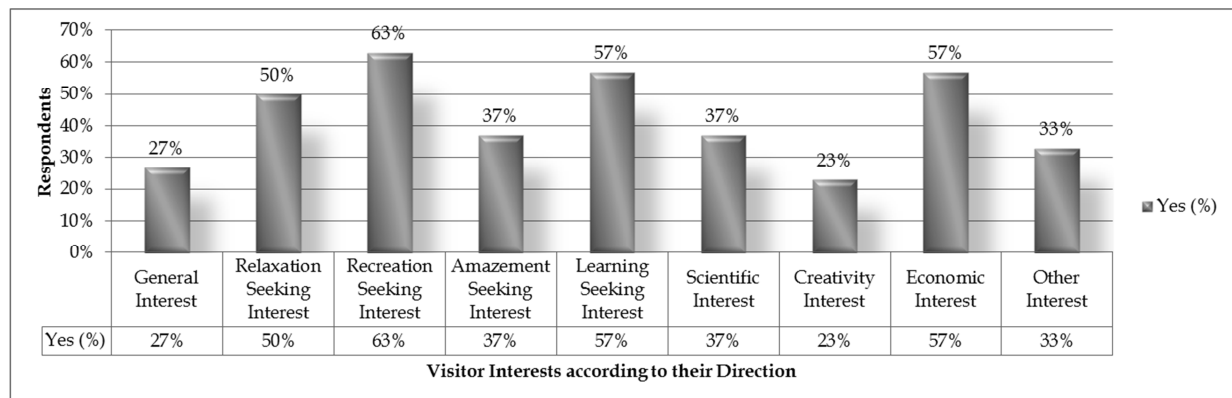

Figure 7: Visitor Interests' Direction towards Wheatear Landscape based on the "Yes" answers (see Arithmetic Means of ANOVA-table 7 in Appendix 8)

The recreation seeking interest has the highest percentage (63%) among the visitor interests towards the Wheatear landscape of the certain area (see ANOVA-table 7). It means that the recreation seeking interest among the visitor interests would attract the highest number of test subjects as visitors to the Wheatear bird habitat of the certain area. The P-value is less than 0,05 in this case as well which refers to significant difference among the visitor interests towards the Wheatear landscape. The recreation seeking interest does have the largest attracting power among the visitor interests towards the Wheatear bird habitat of the certain area.

Towards the Tawny Pipit bird habitat seen as virtual landscape in the certain area (see Figure 8), there are 4 existing visitor interests which are the following; relaxation seeking interest (63%), recreation seeking interest (60%), learning seeking interest (60%), and economic interest (57%). There are also such visitor interests which do not exist related to the Tawny Pipit bird habitat seen as virtual landscape of the certain area. These not existing visitor interests are the following; general interest (33%), amazement seeking interest (37%), scientific interest (40%), and creativity interest (20%). Concerning the other interest, it is not possible to judge that it exists (50%) or does not exist (50%) related to the Tawny Pipit bird habitat seen as virtual landscape of the certain area.
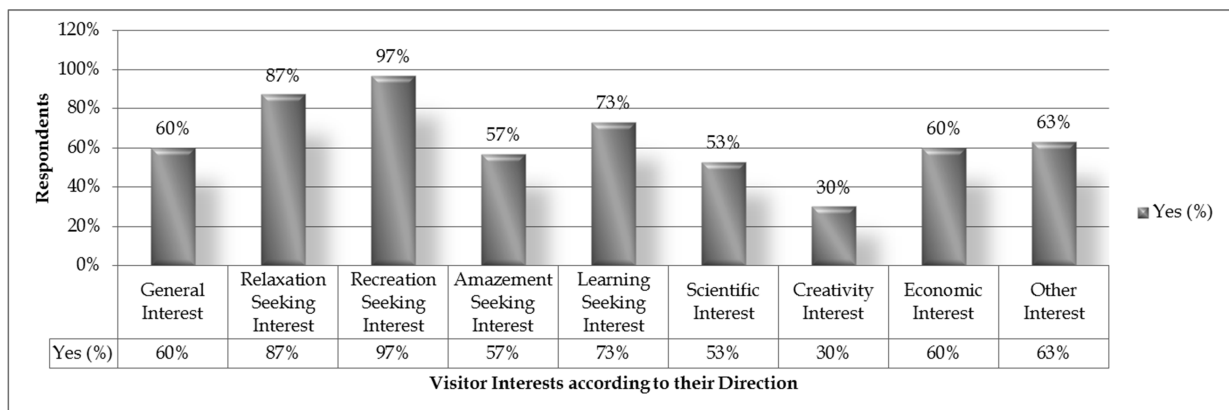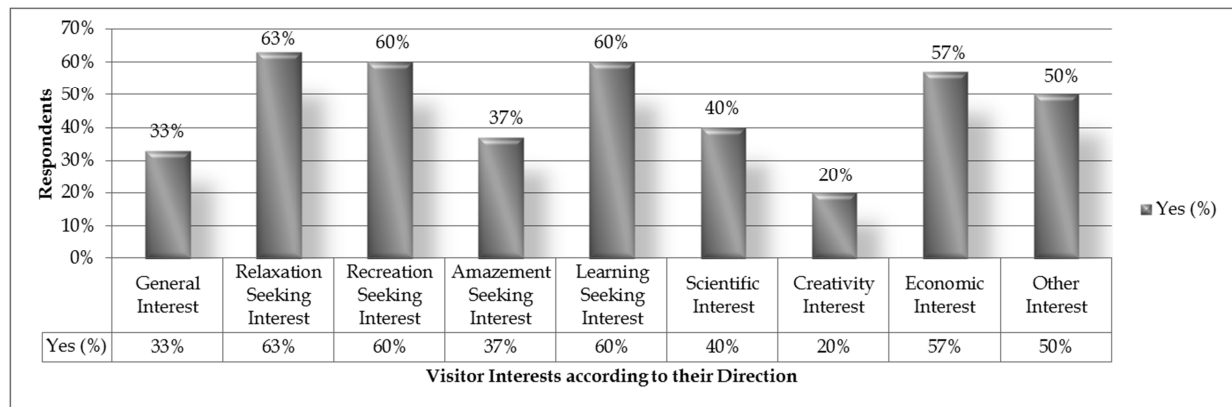
Figure 8: Visitor Interests' Direction towards Tawny Pipit Landscape based on the "Yes" answers (see Arithmetic Means of ANOVA-table 8 in Appendix 8)

The relaxation seeking interest is the most relevant visitor interests towards the Tawny Pipit bird habitat of the certain area (see ANOVA-table 8). Its percentage is the highest (63%) among the visitor interests which means that the relaxation seeking interest would attract the highest number of test subjects as visitors to the Tawny Pipit bird habitat of the certain area. The P-value is less than 0,05 which refers to significant difference among the visitor interests towards Tawny Pipit landscape. The relaxation seeking interest does have the strongest attracting power among the visitor interests towards this virtual landscape of the certain area.

Towards the Red-backed Shrike bird habitat seen as virtual landscape in the certain area (see Figure 9), there are 4 visitor interests which do exist. These existing visitor interests towards this virtual landscape are the following; general interest (53%), relaxation interest (77%), recreation interest (80%), and learning seeking interest (67%). There are 3 non-existing visitor interests towards the Red-backed Shrike landscape of the certain area which are the following such as amazement interest (43%), scientific interest (37%), and creativity interest (23%). There are 2 visitor interests about which is not possible to judge that these exist (50%) or do not exist (50%) towards the Red-backed Shrike landscape and these are the economic interest and the other interest.
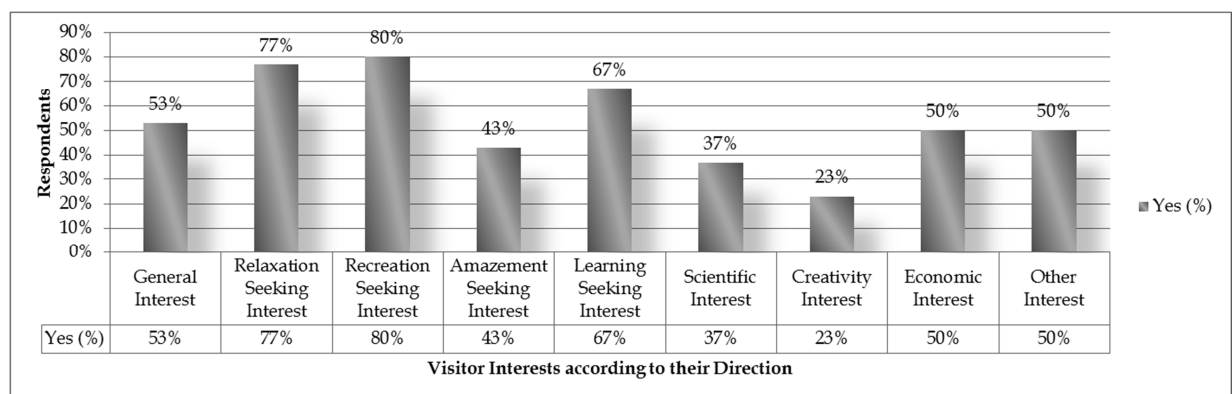
Figure 9: Visitor Interests' Direction towards Red-backed Shrike Landscape based on the "Yes" answers (see Arithmetic Means of ANOVA-table 9 in Appendix 8)

The recreation seeking interest is the most relevant visitor interest towards the Red-backed Shrike landscape of the certain area (see ANOVA-table 9). Its percentage is 80% among the visitor interests which means that it would attract 80% of the test subjects as visitors to the Red-backed Shrike bird habitat of the certain area. The P-value is less than 0,05 in this case as well which refers to the significant difference among the visitor interests towards Red-backed Shrike landscape. The recreation seeking interest does have the highest attracting power among the visitor interests towards the Red-backed Shrike bird habitat seen as virtual landscape of the certain area.

Towards the Kingfisher bird habitat seen as virtual landscape in the certain area (see Figure 10), there are 6 visitor interests which exist which are the following; general interest (83%), relaxation seeking interest (90%), recreation seeking interest (80%), amazement seeking interest (53%), learning seeking interest (60%), and the other interest (53%). Related to the Kingfisher landscape, scientific interest (43%) and creativity interest (33%) do not exist, and the economic interest cannot be judged concerning its existence (50%) or non-existence (50%) in the certain area. These percentages show how many test subjects would go to the Kingfisher bird habitat of the certain area as visitors.
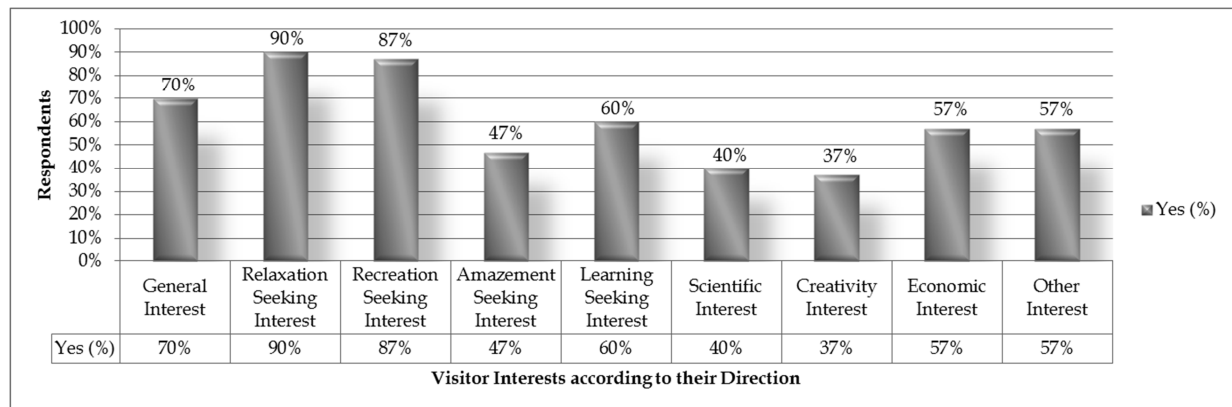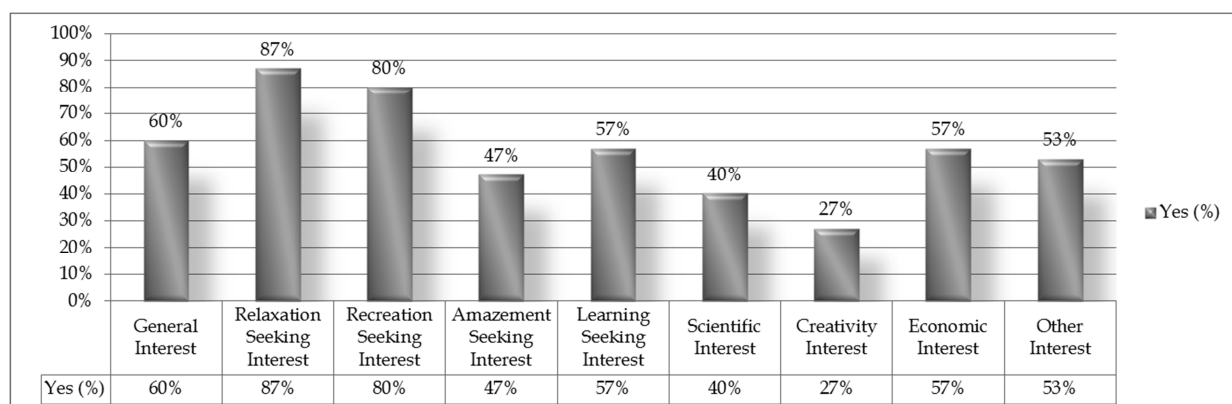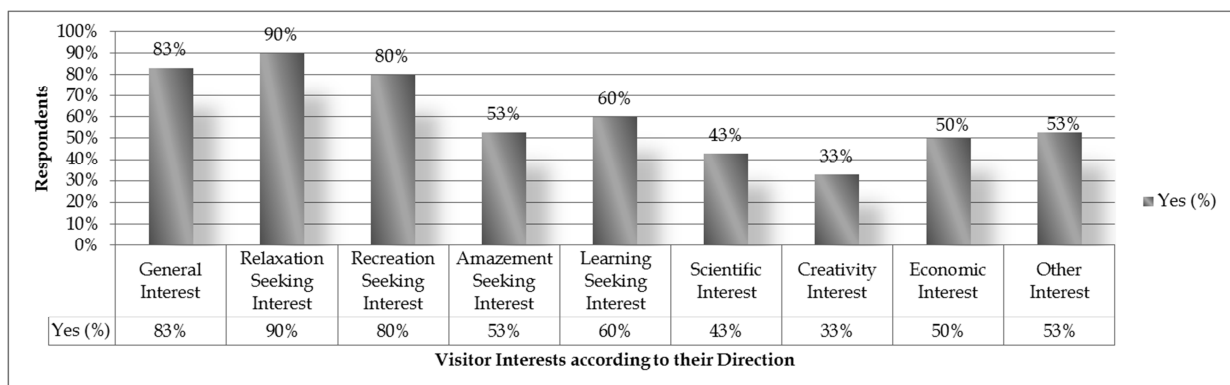

Figure 10: Visitor Interests' Direction towards Kingfisher Landscape based on the "Yes" answers (see Arithmetic Means of ANOVA-table 10 in Appendix 8)

The relaxation seeking interest (90%) is the most important among the visitor interests towards the Kingfisher bird habitat seen as virtual landscape of the certain area (see ANOVA-table 10). The relaxation seeking interest from the visitor interests would attract 90% of the test subjects as visitors to the Kingfisher landscape of the certain area. The P-value is less than 0,05 which refers to significant difference among the visitor interests towards Kingfisher landscape. The relaxation seeking interest does have the strongest attracting power among the visitor interests towards the Kingfisher bird habitat seen as virtual landscape of the certain area.

4.3.1.2. Answer for the 1st sub-Research Question by Arithmetic Means from ANOVA-Tables per Visitor Interests

The 1st sub-research question, as it was said before, is about how common are the defined visitor interests according to their direction related to bird habitats seen as virtual landscapes which would attract visitors to the certain area. Table 10 shows each visitor interest which would attract the test subjects as visitors to the 10 bird habitats seen as virtual landscapes of the certain area. Every box with the percentage refers to the "YES" answers of the test subjects out of 100%. It is visible that in chapter 4.3.1.1., the answer for the first sub-research question has been organized according to the columns. But now, in this chapter, the answer for the sub-research question is organized according to the rows.

Table 10: Visitor Interests' Direction towards Bird Habitats seen as Virtual Landscapes of the Certain Area based on Arithmetic Means of ANOVA-Tables by Visitor Interests

	Black Woodpecker Landscape	Honey Buzzard Landscape	Wryneck Landscape	Nightjar Landscape	Woodlark Landscape	Stonechat Landscape	Wheatear Landscape	Tawny Pipit Landscape	Red-backed Shrike Landscape	Kingfisher Landscape
General interest	67%	73%	60%	70%	60%	57%	27%	33%	53%	83%
Relaxation seeking interest	90%	83%	87%	90%	87%	80%	50%	63%	77%	90%
Recreation seeking interest	87%	87%	97%	87%	80%	83%	63%	60%	80%	80%
Amazement seeking interest	50%	50%	57%	47%	47%	43%	37%	37%	43%	53%
Learning seeking interest	57%	57%	73%	60%	57%	60%	57%	60%	67%	60%
Scientific interest	40%	47%	53%	40%	40%	37%	37%	40%	37%	43%
Creativity interest	27%	17%	30%	37%	27%	23%	23%	20%	23%	33%
Economic interest	63%	60%	60%	57%	57%	60%	57%	57%	50%	50%
Other interest	53%	53%	63%	57%	53%	50%	33%	50%	50%	53%

In order to have better understanding, Figure 11 has been constructed showing the highest Arithmetic Means of ANOVA-tables per each visitor interest. Within general interest, there is significant difference. Figure 11 shows that concerning the general interest the Kingfisher bird habitat seen as virtual landscape is the most important. The 83% as the highest arithmetic mean among all the bird habitats seen as virtual landscapes from the aspect of general interest refers to the Kingfisher landscape. This is the most important virtual landscape according to the test subjects being attracted to the certain area by the general interest towards bird habitats seen as virtual landscapes. General interest has the highest attracting power towards Kingfisher bird habitat seen as virtual landscape, therefore most of the test subjects (83% of them) would go as visitors to that bird habitat of the certain area.

There is significant difference related to relaxation seeking interest. In case of the relaxation seeking interest, there are 3 most important bird habitats such as Black Woodpecker bird habitat-, Nightjar bird habitat-, Kingfisher bird habitat seen as virtual landscape. Each of them has 90% as arithmetic mean among the bird habitats seen as virtual landscapes from the view of relaxation seeking interest.
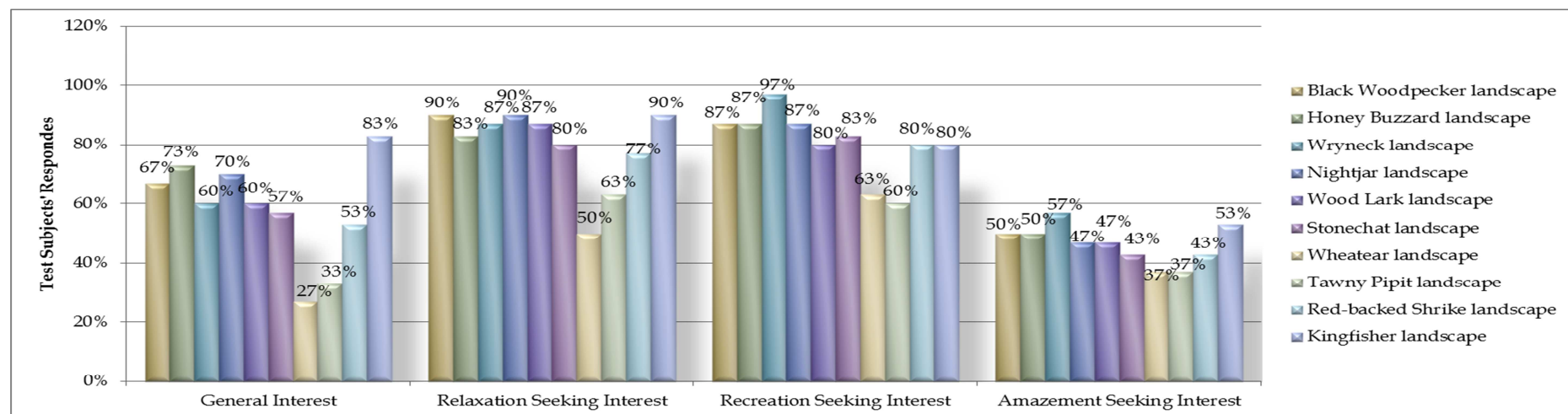
Figure 11: Arithmetic Means of ANOVA-Tables per Visitor Interests I. (Appendix 8)

This also means that relaxation seeking interest has the largest attracting power towards Black Woodpecker-, Nightjar-, and Kingfisher bird habitat seen as virtual landscape of the certain area. Therefore, the same amount of test subjects (90% of them) would be attracted as visitors by the relaxation seeking interest towards the mentioned 3 bird habitats as virtual landscapes of the certain area (see Table 10 and Figure 11).

Within the recreation seeking interest there is significant difference. When the recreation seeking interest is under the scope of the analysis, Table 10 and Figure 11 show that the most important is the Wryneck bird habitat seen as virtual landscape. This refers to that most of the test subjects (97% of them) would be attracted as visitors to the Wryneck bird habitat seen as virtual landscape of

the certain area. Recreation seeking interest does possess the highest attracting power towards the Wryneck bird habitat seen as virtual landscape in the certain area.

Concerning the amazement seeking interest (see Figure 12), there is no significant difference, but the Wryneck bird habitat seen as virtual landscape has the highest arithmetic mean. The 57% of the test subjects would be attracted as visitors to the certain area by the amazement seeking interest towards Wryneck bird habitat seen as virtual landscape. This refers to that the amazement seeking interest does have the largest attracting power towards the Wryneck bird habitat seen as virtual landscape within the certain area. However, it is not the most important virtual landscape, but it does not exist at all within the amazement seeking interest. The reason is that the P-value is more than 0,05.
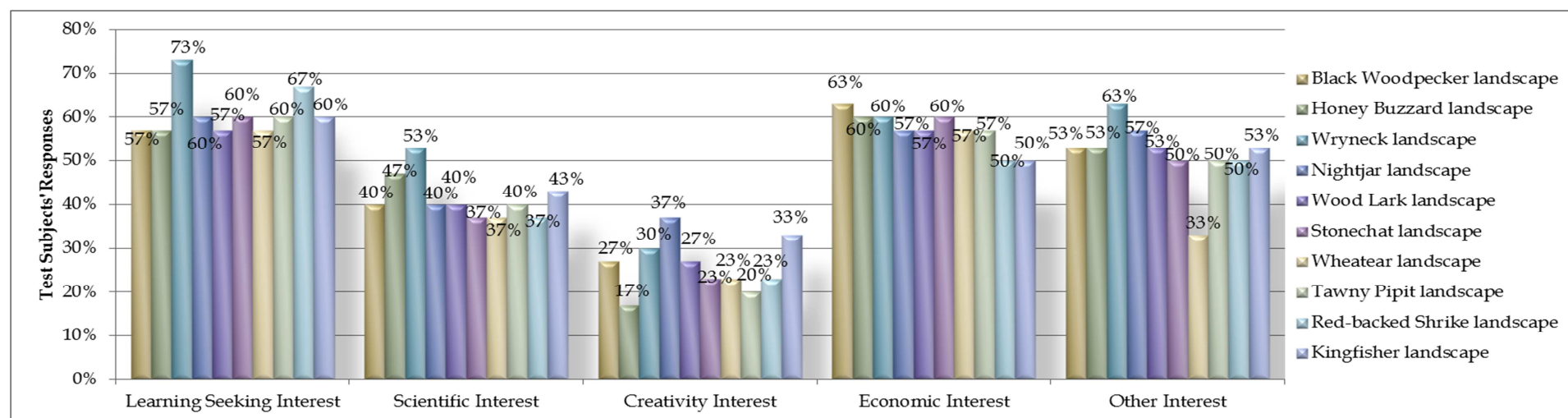
Figure 12: Arithmetic Means of ANOVA-Tables per Visitor Interests II. (Appendix 8)

The next visitor interest according to the direction based categorization is the learning seeking interest. According to the ANOVA Single factor analysis, there is no significant difference concerning the learning seeking interest, but the Wryneck bird habitat seen as

virtual landscape has the highest arithmetic mean. The 73% of the test subjects would be attracted as visitors to the certain area by the learning seeking interest towards the Wryneck bird habitat seen as virtual landscape. This also means that the learning seeking interest does have the largest attracting power towards the Wryneck bird habitat seen as virtual landscape comparing it to the other bird habitats of the certain area.

There is no significant difference related to the scientific interest based on the Anova Single Factor analysis. Scientific interest has the largest attracting power towards Wryneck bird habitat seen as virtual landscape in the certain area. According to the Table 10 and Figure 12, by the scientific interest towards Wryneck bird habitat seen as virtual landscape, 53% of the test subjects would be attracted as visitors to the certain area. The scientific interest has the strongest attracting power towards the Wryneck bird habitat of the certain area.

The next visitor interest which is under analysis is the creativity interest. It possess the highest percentage (37%) towards Nightjar bird habitat seen as virtual landscape of the certain area. But it is not the most relevant bird habitat, since based on Anova Single Factor analysis, it does not exist related to the creativity interest. This means that 37% of the test subjects would be attracted as visitors to the certain area by the creativity interest towards Nightjar bird habitat seen as virtual landscape

There is no significant difference related to the economic interest based on Anova Single Factor analysis. The economic interest towards Black Woodpecker bird habitat seen as virtual landscape would attract 63% of the test subjects to the certain area as visitors. It refers to that the economic interest has the largest attracting power towards Black Woodpecker bird habitat seen as virtual landscape in the certain area. However, it is not the most important virtual landscape, but it does not exist at all related to economic interest.

The other interest is the last visitor interest according to the newly established categorization based on visitor interests' direction. Its highest attracting power is linked to the Wryneck bird habitat seen as virtual landscape in the certain area. But, this is not the most important virtual landscape from the point of view of the other interest, since it does not exist based on Anova Single Factor analysis of other interest. Figure 12, which is built upon the highest arithmetic means of ANOVA-tables per visitor interest, shows that 63% of the test subjects would be attracted as visitors to the certain area by the other interest towards Wryneck bird habitat seen as virtual landscape.

4.3.2. First Sub-Research Question Analysed towards The Certain Area as a Whole
In Table 10, the reader can glance at the visitor interests according to their direction towards the certain area seen as a whole. Table 10 below shows the existence of 6 visitor interests (general interest, relaxation seeking interest, recreation seeking

interest, learning seeking interest, economic interest, and other interest) towards the certain area. Besides, it also shows the non-existence of 3 visitor interests (amazement seeking interest, scientific interest and creativity interest) towards the certain area. In this categorization, those exist which are above 50%, and which are less than 50% do not exist as it was already explained earlier.

Table 11: Last Row of Table 9 Showing Visitor Interests' Direction towards the Certain Area based on Exist/Not Exist/Cannot be Judged Categorization

	General Interest	Relaxation Seeking Interest	Recreation Seeking Interest	Amazement Seeking Interest	Learning Seeking Interest	Scientific Interest	Creativity Interest	Economic Interest	Other Interest
Total The Certain	Exist	Exist	Exist	Not Exist	Exist	Not Exist	Not Exist	Exist	Exist

Figure 13 shows the percentages which is behind the abstract categorization called Exist/Not Exist/Cannot be Judged (see Chapter 4.2.2.1.). But in current case, it is linked to the certain area including all the 10 bird habitats seen as virtual landscapes. Figure 13 shows that general interest (80%), relaxation seeking interest (90%), recreation seeking interest (100%), learning seeking interest (100%), economic interest (80%), and other interest (60%) do exist towards the certain area, since these percentages are above 50%.

Yes (%)	80%	90%	100%	20%	100%	10%	0%	80%	60%
	General Interest	Relaxation Seeking Interest	Recreation Seeking Interest	Amazement Seeking Interest	Learning Seeking Interest	Scientific Interest	Creativity Interest	Economic Interest	Other Interest

Visitor Interests according to their Direction
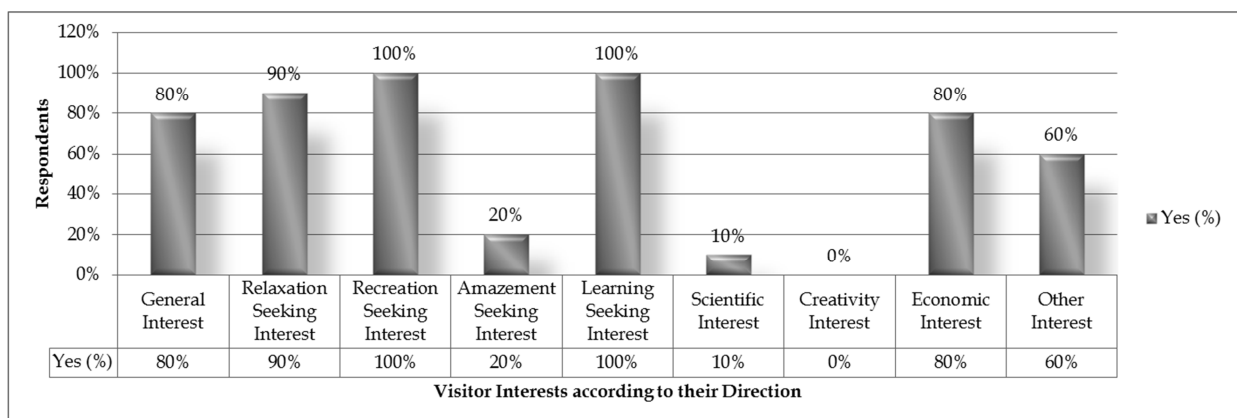
Figure 13: Visitor Interests' Direction towards the Certain Area as a Whole based on the "YES" Answers

Only about the creativity interest (0%) towards the certain area can be told that it does not exist at all. The amazement seeking interest (20%), and the scientific interest (10%), however also do not exist based on the abstract categorization called Exist/Not Exist/Cannot be Judged, since these are less than 50%.

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average (Arith. Mean)	Variance		
General Interest	10	8	80%	0.177778		
Relaxation Seeking Interest	9	9	100%	0		
Recreation Seeking Interest	10	10	100%	0		
Amazement Seeking Interest	8	2	25%	0.214286		
Learning Seeking Interest	10	10	100%	0		
Scientific Interest	10	1	10%	0.1		
Creativity Interest	10	0	0%	0		
Economic Interest	8	8	100%	0		
Other Interest	7	6	86%	0.142857		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	13.58188	8	1.697735192	25.51596	2.79E-18	2.067984
Within Groups	4.857143	73	0.066536204			
Total	18.43902	81				

Figure 14: ANOVA Table of Visitor Interests' Direction towards the Certain Area

But as it is seen the percentages of Figure 13 sometimes differ from the percentages of Figure 14. The reason is that in the Figure 13, the number of bird habitats is always 10 to which the comparison has been carried out. But in Figure 14, the ANOVA Single Factor result related to the certain area is built upon the abstract categorization called Exist/Not Exist/Cannot be Judged. Therefore there are such visitor interests which attracting power towards some bird habitats seen as virtual landscapes of the certain area cannot be judged based. And thus, these are not included in the "*Count*" column of Figure 14. In these cases, the "*Count*" is less than 10 which refers to the number of bird habitats seen as virtual landscapes of the certain area towards which the named visitor interest is linked. The *Sum* in Figure 14 shows only those bird habitats' number towards which the named visitor interest does exist based on the abstract categorization. Those bird habitats towards which the visitor interest cannot be judged or does not exist are excluded from this result. The P-value shows that there is significant difference between the visitor interests related to the certain area, but in this case not all the 10 bird habitats seen as virtual landscapes are involved as it was mentioned above.

When the analysis is made per visitor interest, the explanation has to be in-depth. Visitor interests differ related to each bird habitat seen as virtual landscape in the certain area when they are analysed separately. For example, amazement seeking interest does not exist towards the certain area as a whole (see Figure 13, 14), but it does exist towards 2 bird habitats seen as virtual landscapes such as Wryneck landscape and Kingfisher landscape. Concerning 2 bird habitats seen as virtual landscapes, amazement seeking interest cannot be judged. Related to 6 bird habitats seen as virtual landscapes, it does not exist (see Table 10). Therefore, towards the

certain area seen as a whole, amazement seeking interest does not exist (Table 11).

4.3.3. Ranking of Visitor Interests' Direction and Bird Habitats Seen as Virtual Landscapes

Appendix 9 and 10 show the ranked visitor interests according to their direction by each bird habitat seen as virtual landscape of the certain area. The most important visitor interest of each bird habitat seen as virtual landscape of the certain area (each highest column in Appendix 9 and 10) can be seen in Table 13 with its percentage.

Table 12: Ranking of the Bird Habitats seen as Virtual Landscapes based on the Most Important Visitor Interests

Ranking	Name of Bird Habitat Seen as Virtual Landscape	The most important Visitor Interest	Attracted Visitors (%)
1.	Wryneck Landscape	Recreation seeking interest	97%
2.	Black Woodpecker Landscape	Relaxation seeking interest	90%
2.	Kingfisher Landscape	Relaxation seeking interest	90%
2.	Nightjar Landscape	Relaxation seeking interest	90%
3.	Woodlark Landscape	Relaxation seeking interest	87%
3.	Honey Buzzard Landscape	Recreation seeking interest	87%
3.	Stonechat Landscape	Recreation seeking interest	87%
4.	Red-backed Shrike Landscape	Recreation seeking interest	80%
5.	Wheatear Landscape	Recreation seeking interest	63%
5.	Tawny Pipit Landscape	Relaxation seeking interest	63%

Towards the bird habitats seen as virtual landscapes of the certain area, relaxation seeking interest 5 times occurs as the most important visitor interest. Another most important visitor interest is the recreation seeking interest towards the bird habitats seen as virtual landscapes. This visitor interest also 5 times occurs as the most important one among the visitor interests. When relaxation seeking interest is the most important, it is related to the Black Woodpecker-, Nightjar-, Woodlark, Tawny Pipit-, Kingfisher bird habitats seen as virtual landscapes. With other words, the relaxation seeking interest does have the largest attracting power towards these mentioned bird habitats seen as virtual landscapes of the certain area. When recreation seeking interest is the most important among visitor interests according to their direction, it is said concerning the Honey Buzzard-, Wryneck-, Stonechat-, Wheatear-, Red-backed Shrike bird habitats seen as virtual landscapes. The recreation seeking interest does have the highest attracting power towards mentioned bird habitats seen as virtual landscapes of the certain area. The percentages in Table 14 represent the amount of people who are attracted by the named visitor interests to the specific bird habitats seen as virtual landscapes of the certain area. These percentages are the most important visitor interests' arithmetic means (averages) from the ANOVA-Table 1-10. Table 13 is organized according to the decreasing of the percentages of the attracted test subjects' number to those bird habitats.

Since, only these two visitor interests are the most important from this aspect, therefore the visitor interests besides these ones also need to be assessed, but it has to be done from a different point of view. This is done by comparing the bird habitats seen as virtual landscapes to each other per visitor interest according to their direction. By watching the result based on Figure 11 and 12, a different categorization has been established (see Table 13).

Table 13: Ranking of the Visitor Interests based on the Bird Habitats Seen as Virtual Landscapes with the Highest Percentage(s)

Ranking	Visitor Interests' Direction	Bird Habitat Seen as Virtual Landscape	Attracted Visitors (%)
1.	Recreation Seeking Interest	Wryneck Landscape	97%
2.	Relaxation Seeking Interest	Black Woodpecker-, Nightjar-, Kingfisher Landscape	90%-90%-90%
3.	General Interest	Kingfisher Landscape	83%
4.	Learning Seeking Interest	Wryneck Landscape	73%
5.	Economic Interest	Black Woodpecker Landscape	63%
5.	Other Interest	Wryneck Landscape	63%
6.	Amazement Seeking Interest	Wryneck Landscape	57%
7.	Scientific Interest	Wryneck Landscape	53%
8.	Creativity Interest	Nightjar Landscape	37%

Table 13 is based on Figure 11 and 12. It shows the visitor interests according to their direction towards bird habitats seen as virtual landscapes in a ranked way. When the general interest is under assessment, the Kingfisher bird habitat seen as virtual landscape is the most popular among the bird habitats seen as virtual landscapes of the certain area. This means that general interest towards Kingfisher landscape would attract most of the test subjects (83% of them) as visitors to the certain area. When the bird habitats seen as virtual landscapes are ranked according to the relaxation seeking interest, the result (Figure 11) shows that relaxation seeking interest towards Black Woodpecker-, Nightjar-, and Kingfisher bird habitats seen as virtual landscapes would attract most of the test subjects (90%-90%-90% of them) as visitors to the certain area. When the bird habitats seen as virtual landscapes are ranked based on the learning seeking interest, then the highest learning seeking interest is linked to the Wryneck bird habitat seen as virtual landscape. This means that the learning seeking interest would attract the highest amount of test subjects (73% of them) as visitors to the Wryneck bird habitat of the certain area. When the bird habitats are ranked based on the scientific interest, Table 13 shows that scientific interest towards Wryneck bird habitat seen as virtual landscape would attract the highest percentage of the test subjects (53% of them) as visitors to the certain area. The other interest towards Wryneck bird habitat seen as virtual landscape would attract most of the test

subjects (63% of them) as visitors to the certain area. It happens when the bird habitats are ranked based on the other interest. The creativity interest towards Nightjar bird habitat seen as virtual landscape would attract the biggest amount of test subjects (37%) as visitors to the certain area if the bird habitats would be ranked based on the creativity interest. The economic interest towards Black Woodpecker bird habitat seen as virtual landscape would attract the largest percentage of the test subjects (63%) to the certain area if the bird habitats would be ranked based on this lastly mentioned visitor interest.

4.3.4. Mode of Visitor Interests' Direction and Mode of Bird Habitats seen as Virtual Landscapes

The Table 14 shows the mode of each visitor interest according to their direction towards in the certain area including all the 10 bird habitats seen as virtual landscapes. But it is built upon the abstract categorization called Exist/Not Exist/Cannot be Judged. According to Verhoeven and van Baal (2008: 210) the mode can be set also for "non-numerical" variables as well which happens in the MSc thesis. Besides, in current case, the (most frequent) mode is not only 1 visitor interest, but 2 which are the following such as "recreation seeking interest" and "learning seeking interest". The percentage which belongs to both of them is 18,5% - 18,5%. Verhoeven and Van Baal (2008: 210) states that sometimes instead of one mode, the division has two modes. This is called *bimodal distribution* having 2 peaks which can be seen in the frequency table below. But the frequencies (mode of visitor interests) are equal with the *Sum* of ANOVA Single Factor of visitor interests' direction towards the certain area (see Figure 14).

Table 14: Mode of Visitor Interests' Direction related to the Certain Area

	Frequency	%
General interest	8	14.8
Relaxation seeking interest	9	16.7
Recreation seeking interest	10	18.5
Amazement seeking interest	2	3.7
Learning seeking interest	10	18.5
Scientific interest	1	1.9
Creativity interest	0	0.0
Economic interest	8	14.8
Other interest	6	11.1
Total	54	100.0

Table 14 shows the frequencies and the percentages related to each visitor interest towards the certain area's bird habitats seen as virtual landscapes and Figure 15 is based upon these frequencies. There are two modes (the most frequent visitor interests) which are the recreation seeking interest and the learning seeking interest as it was mentioned earlier. Visitors, who are represented by test subjects in the MSc

thesis, are attracted the most frequently by *recreation seeking interest* and by the *learning seeking interest* to the certain area's the 10 bird habitats seen as virtual landscapes. The *creativity interest* does not attract people to any bird habitats seen as virtual landscapes, while the *scientific interest* does attract them, but only to the Wryneck bird habitat seen as virtual landscape of the certain area. The *relaxation seeking interest* attracts people to all the bird habitats seen as virtual landscapes of the certain area, except one – Wheatear bird habitat seen as virtual landscape - which cannot be judged that its attracting power exist or not towards that bird habitat. The *economic interest* does attract test subjects as visitors people to 8 bird habitats seen as virtual landscapes, but it does not attract test subjects to the Red-backed Shrike-, and Kingfisher bird habitat seen as virtual landscape because concerning them, the existence of its attracting power of the economic interest cannot be judged. The *amazement seeking interest* attracts test subjects as visitors to the Wryneck- and Kingfisher bird habitats seen as virtual landscapes, but it does not attract people to Nightjar-, Wood Lark-, Stonechat-, Wheatear-, Tawny Pipit-, Red-backed Shrike bird habitats seen as virtual landscapes. The amazement seeking interest's attracting power concerning its existence cannot be judged towards the Black Woodpecker- and the Honey Buzzard bird habitats seen as virtual landscapes. The *general interest* attracts test subjects to 8 bird habitats seen as virtual landscapes of the certain area, so to each of them, except to the Tawny Pipit-, and Wheatear bird habitats seen as virtual landscapes. The other interest attracts test subjects to 6 bird habitats seen as virtual landscapes such as Black Woodpecker-, Honey Buzzard-, Wryneck-, Nightjar-, Wood Lark-, Kingfisher bird habitats seen as virtual landscapes. But the other interest does not attract people to the Wheatear bird habitat seen as virtual landscape of the certain area. Besides, the existence of the other interest's attracting power cannot be judged towards the Stonechat-, Red-backed Shrike-, and Tawny Pipit bird habitats seen as virtual landscapes of the certain area.
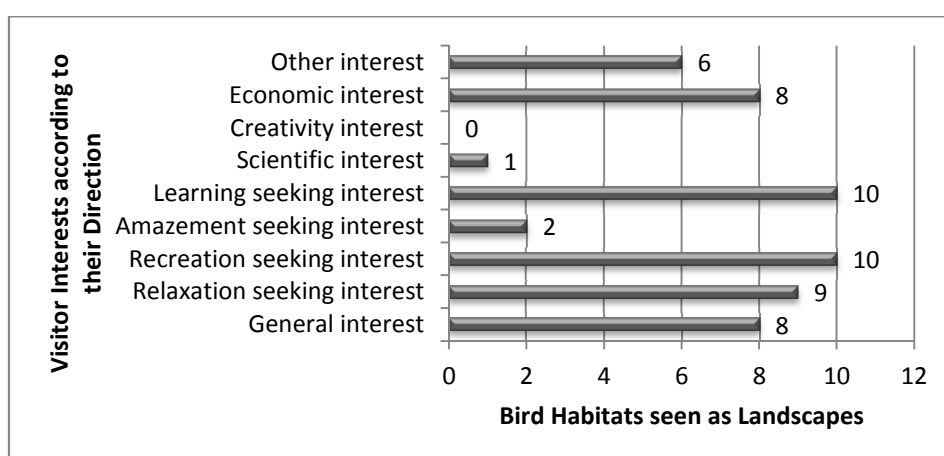
Figure 15: Clustered Bar of Frequencies related to Visitor Interests' Direction towards Bird Habitats seen as Virtual landscapes of the Certain Area

The mode from another point of view also can be derived which is the mode of bird habitats seen as virtual landscapes of the certain area. By doing so, it is possible to reveal how frequently bird habitats seen as virtual landscapes occur linked to the visitor interests according to their direction. This refers to how frequently test subjects as visitors would be attracted by visitor interests according to their direction towards each bird habitat seen as virtual landscape of the certain area. In the frequency table related to this aspect (see Table 16), the Wryneck bird habitat seen as virtual landscape occurs the most frequently (8 times out of 9). Since its frequency the highest, therefore it is the mode among the bird habitats seen as virtual landscapes of the certain area. Its frequency number (8) means that Wryneck bird habitat seen as virtual landscape is related to 8 visitor interests according to their direction, and thus test subjects would be attracted as visitors to the Wryneck landscape by these 8 visitor interests. These visitor interests are the following: general-, relaxation seeking-, recreation seeking-, amazement seeking-, learning seeking interest, scientific-, economic-, and other interest. Only the creativity interest is missing among the visitor interests of test subjects related to the Wryneck bird habitat seen as virtual landscape of the certain area (see Table 14).

Table 15: Mode of Bird Habitats seen as Virtual landscapes of the Certain Area

	Frequency	%
Black Woodpecker landscape	6	11.1
Honey Buzzard landscape	6	11.1
Wryneck landscape	8	14.8
Nightjar landscape	6	11.1
Wood Lark landscape	6	11.1
Stonechat landscape	5	9.3
Wheatear landscape	3	5.6
Tawny Pipit landscape	4	7.4
Red-backed Shrike landscape	4	7.4
Kingfisher landscape	6	11.1
Total	54	100

The Figure 16 has been constructed in order to show the occurrences of the bird habitats seen as virtual landscapes of the certain area related to visitor interests' direction in a clustered bar chart. The frequency number of the Kingfisher-, Wood Lark-, Nightjar-, Honey Buzzard-, and Black Woodpecker bird habitats seen as virtual landscapes is 6 in each case. This means that 6 visitor interests towards each of these bird habitats seen as virtual landscapes would attract the test subjects as visitors to the certain area. Among them, there can be differences concerning which are those 6 visitor interests which would attract the test subjects as visitors to the certain area. Kingfisher bird habitat seen as virtual landscape occurs 6 times as it was mentioned, therefore 6 visitor interests towards Kingfisher bird habitat seen as virtual landscape

would play a role in attracting test subjects as visitors to the certain area. These visitor interests towards Kingfisher landscape are the following general interest, relaxation seeking-, recreation seeking-, amazement seeking-, learning seeking interest, other interest. Towards the Wood Lark-, Nightjar-, Honey Buzzard-, and Black Woodpecker landscapes the general interest, relaxation seeking-, recreation seeking-, learning seeking interest, economic-, and other interest would attract the test subjects as visitors. Toward the Red-backed Shrike landscape of the certain area the general interest, relaxation seeking-, recreation seeking-, learning seeking interest would attract test subjects as visitors. Towards the Tawny Pipit landscape of the certain area relaxation seeking-, recreation seeking-, learning seeking interest and economic interest would attract test subjects as visitors. The smallest number of visitor interests would be attracted to the Wheatear bird habitat seen as virtual landscape of the certain area and its frequency number is 3. The test subjects would be attracted to the Wheatear landscape by recreation seeking-, learning seeking interest and economic interest. The Stonechat landscape of the certain area would be visited by those test subjects as visitors who would be attracted by general interest, relaxation seeking-, recreation seeking-, learning seeking interest, and economic interest.
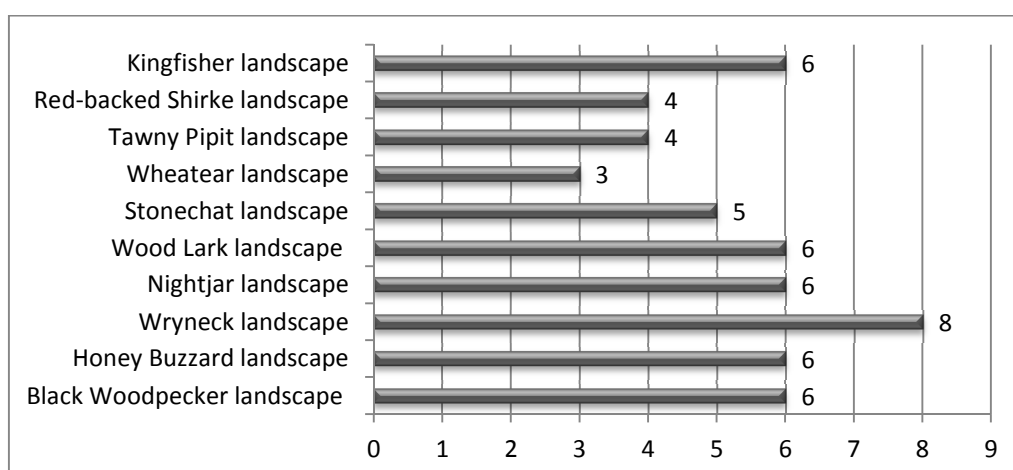
Figure 16: Clustered Bar of the Frequencies related to Bird Habitats seen as Virtual landscapes of the Certain Area

It can be interesting to note that only the Wryneck-, and Kingfisher landscape would be visited in the certain area by those test subjects as visitors who have the amazement seeking interest towards bird habitats seen as virtual landscapes. This also means that amazement seeking interest exists only towards these two bird habitats seen as virtual landscapes. Concerning the Black Woodpecker-, and the Honey Buzzard landscape it cannot be judged.

4.3.5. Answer for the Second Sub-Research Question towards the Certain Area

The second sub-research question is searching the answer for the question of how common are the defined visitor interests' direction related to birds which would

attract the test subjects as visitors to the certain area. When somebody goes to the certain area because of bird related interest, the visitor interest towards bird habitats seen as virtual landscapes is also there indirectly, since that bird could be found elsewhere as well. But the visitor wants to go to that area. It can be easily understood by thinking about the experiment with the questionnaire based interview, since bird songs have been attached to the bird habitats seen as virtual landscapes. Therefore, the visitor interest towards bird habitats seen as virtual landscapes also contains the visitor interest towards birds. This sub-research question can be answered in two different ways. One of the answer which is included in the discussion as well that visitor interests towards bird habitats seen as landscapes, include the visitor interest towards birds as well and thus they give together the 9 visitor interests' percentage. But when these are analysed towards the whole certain area, then the result of visitor interests towards birds are analysed separately (in this current sub-chapter that has happened) from the visitor interests towards bird habitats seen as virtual landscapes (sub-chapter 4.3.2.).

The visitor interests according to their direction towards birds related to the certain area are assessed (Figure 17). It is important to share some details about the indicators (questions) which are attached to the visitor interests according to their direction towards birds. All the visitor interests include only one indicator related to birds, but the amazement seeking interest includes 3 indicators related to them. In this latter case, the answers for these 3 indicators (brown group of indicators in sub-chapter 3.1.4.) have been summed up into 1 answer concerning the amazement seeking interest towards birds related to the certain area. This means when the answers of the test subjects ("Yes"/"No") have been coded into (0/1), the 3 answers together define the amazement seeking interest. These have been concluded by the MSc thesis writer. E.g. two "YES", one "NO" means 0,0,1. Therefore, it gives altogether 0 which means "YES". Besides, the indicator within the recreation seeking interest related to birds (first blue group of indicators in sub-chapter 3.1.4.) referring to the outdoor activity which also includes bird watching according to the view of the MSc thesis writer. However, bird watching as a phrase is not written down in that indicator, only the dog walking on leash, but the "Etc." includes it under the name of outdoor activities.
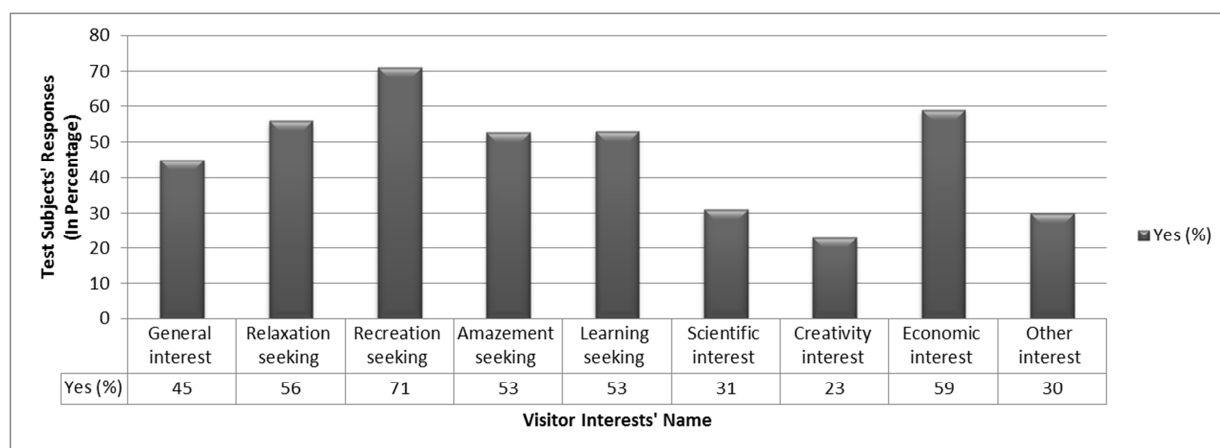
Figure 17: Visitor Interests towards Birds related to the Certain Area

Figure 17 points out that general interest is 45% towards the birds related to the certain area, therefore according to the Exist/Not Exist/Cannot be Judged it does not exist. The reason is that it is below 50%. The relaxation seeking interest towards birds is 56% which means that it does exist. The recreation seeking interest towards birds is higher than the relaxation seeking interest. The recreation seeking interest towards birds is 71% and thus it also exists. The amazement seeking-, and learning seeking interest towards birds are equal and both of them exist, since they are 53% - 53%. Scientific interest towards birds is only 31% which means that it does not exist related to the certain area according to the Exist/Not Exist/Cannot be Judged categorization. The creativity interest towards birds is 23% related to the certain area. It is even lower than the scientific interest. Therefore the creativity interest does not exist according to the Exist/Not Exist/Cannot be Judged categorization. But the economic interest towards birds is 59% which does exist related to the certain area. The other interest towards birds is 30% related to the certain area, and thus it does not exist (Figure 17).

Table 16: Visitor Interests' Direction towards Birds related to the Certain Area (Abstract Categorization)

	General Interest towards Birds	Relaxation Seeking Interest towards Birds	Recreation Seeking Interest towards Birds	Amazement Seeking Interest towards Birds	Learning Seeking Interest towards Birds	Scientific Interest towards Birds	Creativity Interest towards Birds	Economic Interest towards Birds	Other Interest towards Birds
Total The Certain	Not Exist	Exist	Exist	Exist	Exist	Not Exist	Not Exist	Exist	Not Exist

But it is relevant to express that without not taking into account the abstract categorization called Exist/Not Exist/Cannot be Judged, then every visitor interests according to their direction can be pointed out towards birds related to the certain area. Their percentages which have been shown in Figure 17 are always above zero.

4.4. Conclusion of Findings

This part of the MSc thesis would like to prepare the discussion section by answering the research question as well as the sub-research questions based on the quantitative result. But first of all, it is important to explain the situation of the sub-research questions (A, B and 1-9.) in details.

Before 2nd July, 2012, there were two sub-research questions. This is called former case, but in the latter case (after 5th July, 2012, proposal presentation for the Free MSc Programme in Leisure, Tourism and Environment) nine additional sub-research questions (1-9) have been also added next to the existing ones. The reason was to frame the sub-research questions (A, B) by the literature findings and to make the existing sub-research questions stronger. In the latter case, the 9 sub-research questions complement each other and together provide the answer for the former sub-research questions (A, B). With other words, the sub-research questions (1-9) underpin the sub-research question (A, B). (A) How common are the visitor interests according to their direction towards bird habitats seen as virtual landscapes among the test subjects which would attract them as visitors to the certain area? (B) How common are the defined visitor interests according to their direction towards birds among the test subjects which would attract them as visitors to the certain area? The 1. sub-research question out of the 9 hides the newly derived label – *amazement seeking interest* - with the literature based category of Lengkeek (2001). Therefore this sub-research question: (1) How common is *the mode of rapture of Lengkeek (2001)* towards bird habitats seen as virtual landscapes and towards birds among the test subjects which would attract them as visitors to the certain area? – can be seen as part of the sub-question (A).

The answer is given by viewing the visitor interests' direction called amazement seeking interest towards bird habitats seen as virtual landscapes, and towards birds as well among the test subjects. Based on the abstract categorization, the amazement seeking interest does exist towards Wryneck-, and Kingfisher bird habitat seen as virtual landscape. However, since this categorization only takes those as existing ones which are higher than 50%, therefore it is important to see the real percentages shown by the ANOVA Single Factor data as well. The arithmetic means of ANOVA-Table 1-10. shows that 50%-50% of the test subjects would be attracted as visitors to the certain area by the amazement seeking interest towards Black Woodpecker-, and Honey Buzzard bird habitat seen as virtual landscape. While its percentage is different concerning the other bird habitats seen as virtual landscapes of the certain area. The 57% of the test subjects would be attracted as visitors to the certain area by amazement seeking interest towards the Wryneck bird habitat seen as virtual landscape. The 47% of the test subjects out of the sample would be attracted as visitors to the certain area by the amazement seeking interest towards the Nightjar bird habitat seen as virtual landscape. This is the case (47%-47%-47%) also concerning the amazement seeking interest towards Woodlark-, Wheatear-, and

Tawny Pipit bird habitat seen as virtual landscape as well. The 43% of the test subjects would be attracted to the certain area by amazement seeking interest towards Stonechat bird habitat seen as virtual landscape. The same is true (43%) related to the amazement seeking interest towards Red-backed Shrike landscape. By the amazement seeking interest towards Kingfisher landscape, the 53% of the test subjects would be attracted as visitors to the certain area. Out of these numbers, the conclusion which can be drawn is that the highest number of test subjects would be attracted by the amazement seeking interest towards the Wryneck landscape. This means that the Wryneck bird habitat seen as virtual landscape seems to be the most important virtual landscape related to the amazement seeking interest. But the result of the ANOVA-table of amazement seeking interest[7] has pointed out that there is no significant difference among the bird habitats seen as virtual landscapes of the certain area. This is explained by the P-value (0,8666) which is higher than 0,05 in case of the amazement seeking interest. Therefore there is no most important virtual landscape related to the amazement seeking interest. It means that for the visitors it does not matter where they encounter with those experiences which cause amazement for them related to bird habitats seen as virtual landscapes of the certain area.

The (B) former sub-research question is about visitor interests towards birds, which can be answered by 9 sub-research questions according to the latter situation. The first part of the former sub-research question concerning birds is built upon the category of Lengkeek (2001) which is the mode of rapture. This is covered by the amazement seeking interest in the newly established categorization. In order not to present too much data, therefore only the highest number is presented concerning visitor interests towards birds. But all the other numbers can be glanced at the Figure 17. The 53% of the test subjects would be attracted as visitors to the certain area by the amazement seeking interest towards birds.

The second latter sub-question is about *the mode of mastering of Lengkeek (2001)* towards bird habitats seen as virtual landscapes and towards birds among the test subjects. This sub-research question (2) is covered by the scientific interest of the new categorization established based on the visitor interests' direction. The P-value is 0,963 concerning the bird habitats of the certain area related to the scientific interest. Therefore there is no significant difference among the bird habitats seen as virtual landscapes from the view of view of scientific interest. It also means that there is no most relevant bird habitat from the aspect of scientific interest in the certain area. For the test subjects it does not matter where they encounter in the certain

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[7] This ANOVA-table constructed per visitor interests are included in the MSc thesis concerning the general interest, relaxation seeking-, and recreation seeking interest. The further 6 visitor interests' ANOVA-table have been constructed, but not included in the MSc thesis. The reason is that the P-value shows significant difference only concerning those which have been included in the MSc thesis.

area with the experience which is science related. But the highest percentage is 53% related to the Wryneck landscape. By the scientific interest towards Wryneck landscape, the 53% of the test subjects would be attracted as visitors to the certain area. The percentages concerning visitor interests towards every bird habitat seen as virtual landscape of the certain area can be glanced at the Figure 11, and 12.

The mode of mastering of Lengkeek (2001), which is covered by the scientific interest according to the newly established categorization, has to be analysed towards birds as well in order to provide answer for the (2) sub-research question. The 31% of the test subjects would be attracted as visitors to the certain area by the scientific interest towards birds.

The sub-research question (3) is about the mode of interest of Lengkeek (2001) which is covered by the learning seeking interest in the newly established categorization. Firstly, it has to be analysed towards bird habitats seen as virtual landscapes. The ANOVA-table (not included in the MSc thesis) of learning seeking interest shows that 73% of the test subjects would be attracted as visitors to the certain area by the learning seeking interest towards Wryneck bird habitat seen as virtual landscape. This is the highest percentage in the case of the learning seeking interest, but there is no most important virtual landscape. The P-value (0,9538) is more than 0,05, therefore there is no significant difference among bird habitats seen as virtual landscapes of the certain area based on the learning seeking interest.

The learning seeking interest referring to the mode of interest of Lengkeek (2001) towards birds related to the certain area also belongs to the sub-research question (3). Most of the test subjects (53% of them) would be attracted as visitors to the certain area by the learning seeking interest towards birds.

The sub-research question (4) is about the creativity interest which is connected to the art based on Kelly and Nankervis (2001: 59). The highest percentage is 37% among the arithmetic means of the ANOVA-table based on creativity interest. Concerning this percentage, it can be told that 37% of the test subjects would be attracted as visitors to the certain area by creativity interest towards Nightjar landscape. But since the P-value (0,829) is larger than 0,05, therefore there is no most important virtual landscape within the creativity interest towards bird habitats seen as virtual landscapes. This means that for the test subjects, the virtual landscape does not matter concerning where they would like to search for creativity related experience in the certain area.

The creativity interest towards birds also has to be analysed for the sub-research question (4). The Figure 17 shows that 23% of the test subjects would be attracted to the certain area by the creativity interest towards birds. That is where they would like to encounter with creativity related experience related birds in the certain area.

The sub-question (5) which is about the diversionary mode of Cohen (1979) is covered by the newly created category of visitor interests' direction called relaxation seeking interest. The 90% of the test subjects would be attracted as visitors to the certain area by the relaxation seeking interest towards Black Woodpecker-, Nightjar-, and Kingfisher bird habitat seen as virtual landscape. That is the highest percentage which is related to the relaxation seeking interest. Since the P-value related to this visitor interest is less than 0,05, therefore there is significant difference among bird habitats seen as virtual landscapes based on the relaxation seeking interest. This means that there is most important virtual landscape among bird habitats seen as virtual landscapes from this aspect. In current case, it is not only one-, but three virtual landscapes which have been already named above related to the 90%. This means that the test subjects would search for relaxation related experience at the Black Woodpecker-, Nightjar-, and Kingfisher bird habitats of the certain area which are seen as virtual landscapes.

The sub-research question (5) is also linked to birds concerning the diversionary mode of Lengkeek (2001) which is covered by the relaxation seeking interest towards birds. According to the Figure 17, the 56% of the test subjects would be attracted as visitors to the certain area by the relaxation seeking interest towards birds. The test subjects would search for bird related relaxation seeking experience at the certain area.

The next sub-research question (6) is about the amusement mode of Lengkeek (2001) towards bird habitats seen as virtual landscapes covered by the recreation seeking interest in the newly established categorization. The ANOVA-table based on this visitor interest shows that 97% of the test subjects would be attracted to the certain area by the recreation seeking interest towards Wryneck bird habitat seen as virtual landscape. The test subjects would the most likely search for recreation related experience as visitors at that virtual landscape. This is the most important virtual landscape which does have related to recreation seeking interest, since the P-value is less than 0,05.

The sub-research question (6) is also related to birds concerning the amusement mode of Lengkeek (2001) as well which refers to the recreation seeking interest towards birds. The 71% of the test subjects would be attracted to the certain area as visitors by the recreation seeking interest towards birds.

The sub-research question (7) is about the "attraction of living" (Nelson *et al.*, 2004) towards bird habitats seen as virtual landscapes covered by the general interest based on the newly established categorization called visitor interests' direction. The 83% of the test subjects would be attracted as visitors to the certain area by the general interest towards Kingfisher bird habitat seen as virtual landscape. The P-value is less than 0,05 which shows that there is most important bird habitat concerning general interest. The Kingfisher bird habitat is the most important virtual landscape

for this group of test subjects who would most likely search for general experience towards bird habitats seen as virtual landscapes at the Kingfisher landscape of the certain area.

This sub-research question (7) also has to be answered from the aspect of general interest towards birds which is also based on the "attraction of living" concept of (Nelson *et al.*, 2004). The Figure 17 shows that 45% of the test subjects would be attracted as visitors to the certain area by the general interest towards birds related to the certain area.

The sub-research question (8) is about the willingness-to-earn money related to bird habitats seen as virtual landscapes covered by the economic interest towards bird habitats seen as virtual landscapes based on the newly established categorization. The 63% of the test subjects would be attracted to the certain area as visitors by the economic interest towards Black Woodpecker bird habitat seen as virtual landscape. This is the highest percentage from the point of view of economic interest, but according to the P-value (0,99) there is no most important virtual landscape related to this visitor interest. The reason is that the P-value is higher than 0,05. The avarages (arithemtic means) vary between 50% and 63% which means that test subjects do not see much difference among bird habitats seen as virtual landscapes related to economic interest.

The sub-research question (8) concerning willingness-to-earn money related to birds is covered by the economic interest towards birds. It is 59% towards the certain area based on the Figure 17. This means that 59% of the test subjects would be attracted as visitors to the certain area by the economic interest towards birds related to the Black Woodpecker bird habitat seen as virtual landscape.

The last sub-research question (9) which has to be put under analysis is related to the other interest towards bird habitats seen as virtual landscapes. The 63% of the test subjects would be attracted as visitors to the certain aera by the other interest towards Wryneck bird habitat seen as virtual landscape. The P-value (0,726) is more than the 0,05% which means that there is no most important virtual landscape concerning the other interest. This means that test subjects do not see difference between bird habitats seen as virtual landscapes related to the other interest related experiences. Therefore it does not matter where thye would go within the certain area to seek for the other experiences.

This last sub-research question (9) which is about the other interest towards birds also can be answered by the Figure 17. Most of the test subjects (30%) - which is not high percentage – would be attracted to the certain area by the other interest towards birds related to the Honey Buzzard bird habitat seen as virtual landscape.

Every visitor interest towards bird habitats seen as virtual landscapes, and towards birds does belong to the certain area, but in different percentages. And if these

percentages were seen through the lens of the abstract categorization called Exist/Not Exist/Cannot be Judged, then it could not been told about each visitor interest towards bird habitats seen as virtual landscapes, and towards birds. Figure 11 and 12 show the percentages related to visitor interests towards bird habitats seen as virtual landscapes. While Figure 17 shows the percentages of visitor interests towards birds related to the certain area. The highest percentage is attached to the recreation seeking interest towards birds (71%), while the economic interest towards birds is the second highest (59%) among the visitor interests. The third largest visitor interest is the relaxation seeking interest which is 56% towards birds.

5. Conclusion

Firstly, the problem statement has to be answered based on the SAL thesis guideline (2008). Therefore, some conclusion is given for this reason based on the findings of the MSc thesis. There is confusion in the literature, since authors use many different motivation categories. Some authors distinguish between pull and push factors (e.g. Hanqin, 1999, Pan and Ryan, 2007), while there are authors who do not differentiate between them (e.g. Beh and Bruyere, 2007, Bigley and Lee *et al.*, 2010). In order to avoid problem of not knowing which motivation(s) test subjects do have towards bird habitats seen as virtual landscapes, including towards birds as well, therefore questions have been attached to the newly defined categorization based on the visitor interests' direction (see sub-chapter 3.1.4.). Answering these questions, the visitor interests (also called visitor motivations) which are possessed by the test subjects have become clear. But the result has pointed out that one test subject has not only one visitor interest, but more according to the newly defined categorization towards bird habitats seen as virtual landscapes, and birds. But the statement of Pearce (1993a) in Hall and Page (2006: 73) which is about the existence of one dominant motivation at one time has been proved by the MSc thesis. In the MSc thesis, the group of test subjects are under the analysis and not the individuals. The most important visitor interest has been pointed out related to each bird habitat of the certain area which is seen as virtual landscape. The ANOVA-table 1-10 show the most important visitor interests according to its direction concerning each bird habitat seen as virtual landscape. The highest percentage refers to the most important visitor interest of the bird habitat in case the P-value is less than 0,05. If it is more than that, in that case, the most important visitor interest does not exist based on P-value, but still possible to tell which visitor interest possesses the highest percentage. Since Pesonen and Komppula *et al.* (2011) state that the research around pull and push factors are very site specific, therefore it is important to specify the certain area at this point of the MSc thesis.

According to an earlier agreement, the name of the certain area has to be revealed just in this chapter. Therefore, it is time to unhide that it is *The VELUWE!* Its name has been hidden in front of the test subjects of the questionnaire based interviews as well. They only could see the photos (Appendix 1) about it. The initial idea was to study the visitor management on the Natura2000 sites, but the focus of the MSc thesis has gone to their link. This relation between them has been established by writing the MSc thesis about the visitor interests towards the Veluwe's bird habitats seen as virtual landscapes, and towards birds related to the Veluwe. Almost the whole area (91.454 ha) belongs to the Natura2000 network (Bizottság, 2004) and covered by both the Birds- and Habitats Directives. This area of the Netherlands has been designated for 10 breeding birds as Natura2000 site (Pouwels *et al.*, 2010, Pouwels *et al.*, in prep.). The 10 bird habitats of the Veluwe are seen as

virtual landscapes in the MSc thesis. The territory of this area is extremely important from ecological point of view regarding its size and its ecological quality. Almost 75% is composed by forests, 20% of it is characterised by heathlands and shifting sands while 5% by residential areas as well as agricultural landscapes (Heide *et al.,* 2008). After presenting these facts about the Veluwe, it is important to refer to another problem statement which is related to the lack of research on experience seeking, but the MSc thesis has contributed to gather more knowledge on this issue. These visitor interests according to their direction can be attached to the virtual landscape in each case which is considered also as an experience based on Cosgrove (2003) in Lennon (2006: 454). Therefore visitors can search for landscape related experiences e.g. they can search for amazement experience when they have the desire to delight in the depth of a pond Etc.

5.1. Conclusion based on Scientific Objective and the Research Question

The *general interest* towards the Veluwe's Kingfisher bird habitat seen as virtual landscape is 83% based on the result of the MSc thesis. It attracts 83% of the test subjects to the Kingfisher bird habitat of the Veluwe. Heide *et al.* (2008) states about the whole Veluwe that it is very attractive area for living, since it is situated in a picturesque nature area and landscape. But the MSc thesis has pointed out significant difference among its bird habitats seen as virtual landscapes from the aspect of general interest (ANOVA-table 11 in Appendix 8). In this research instrument, 3 indicators are attached to the general interest towards bird habitats seen as virtual landscapes. But general interest towards birds is also embedded in part of them. The indicators are based on Nelson *et al.* (2004: 7) who discuss about the attractive living place, besides the reason of being near to the nature area from Beh and Bruyere (2007) also supports the general interest. From the aspect of birds, the indicator of general interest is built upon Nelson *et al.* (2004) who argue about the attracting power of nature towards birds as the most relevant purpose for choosing living place. Besides, the liking of nature which includes wildlife is also under the discussion of Nelson *et al.* (2004: 7). Therefore, the answers of the test subjects for these three questions - indicators - altogether have provided the 83% general interest towards the Kingfisher bird habitat seen as virtual landscape of the Veluwe. The indicators under this visitor interest has found out that the test subjects 83% would like to live there because of the virtual landscape, and also because of the birds. Furthermore, these test subjects would even be willing to pay money additionally for these mentioned reasons in order to conserve the Kingfisher bird habitat seen as virtual landscape of the Veluwe.

Based on the P-value, the Kingfisher landscape is the most important among all of the virtual landscapes of the Veluwe. Its P-value shows significant difference among its bird habitats seen as virtual landscapes. This is seen by looking at the percentages of general interest (Figure 11). It can be seen that there are large differences pointed out. Towards the Kingfisher bird habitat of the Veluwe, the test subjects 83% is attracted by the general interest towards bird habitats seen as landscapes. While

towards the Wheatear bird habitat, it is only 27%. That is the lowest percentage among the bird habitats seen as virtual landscapes of the Veluwe. Every percentage' level is high related to bird habitats from the aspect of general interest, except the level of the Wheatear-, and Tawny Pipit bird habitats which means that these are not important at all from the aspect of general interest. But every other percentage is high which means that general interest attracts the test subjects towards almost all bird habitats of the Veluwe. But general interest does not exist towards Wheatear-, and Tawny Pipit bird habitats seen as virtual landscapes of the Veluwe. The abstract categorization underpins this from the aspect of Exist/Not Exist/Cannot be Judged labels which shows about the general interest that it does exist towards the Veluwe.

The *relaxation seeking interest* towards the Veluwe's Black Woodpecker-, Nightjar-, and Kingfisher bird habitats seen as virtual landscapes is equally 90%-90%-90% according to the result. The research instrument has pointed out significant difference among bird habitats seen as virtual landscapes of the Veluwe based on the P-value. It has proved that for the test subjects it would count where they would like to go to search for relaxation related experience as visitors in the Veluwe. The 90% refers to the three most important bird habitats seen as virtual landscapes within the Veluwe which has contained the answers of the test subjects given for the 5 questions – indicators – upon which the relaxation seeking interest built. One of them gathers information about the test subjects' holiday related visit to these bird habitats seen as virtual landscapes of the Veluwe. Their given answers are also "Yes" for this indicator which has also contributed to the 90%. This might be understood by contemplating on Van der Heide (2005) in the Ministerie van Landbouw, Natuur en Voedselkwaliteit (2006), since he states that every year 1,7 million people come to the Veluwe as holiday-makers. The 90% also contains the "Yes" answers given for the question – indicator - which deals with visiting of the bird habitats for relaxing by listening to bird songs in their natural environment. This has been built upon Kelly and Nankervis (2010: 60) who mentions bird songs as a source of relaxation. Besides, the "YES" answers given for the indicator of relaxing mentally as a reason for site visit is also included in the 90% underpinned by the discussion of Pan and Ryan (2007) about refreshing of the mind, seeking of tranquillity, and also by Hanqin (1999) who also discusses about relaxing and physical resting. The gathered data is also supported by the "Yes" answers given for the indicator of having picnic on these mentioned 3 bird habitats seen as virtual landscapes of the Veluwe based on Pan and Ryan (2007) who elaborate about picnic areas as a pull factor, however in the MSc thesis it is altered since the relaxation seeking interest is the pull factor itself. The Vacation Travel Attitude Survey (1967) also refers to food, and scenery as motivations (Dann, 1981), but this also just contribute to the picnic related indicator as part of relaxation seeking interest within the research instrument. The test subjects whose answers define the 90% relaxation seeking interest towards the Veluwe's Black Woodpecker-, Nightjar-, and Kingfisher bird habitats seen as virtual landscapes also would be willing

to pay additional money for these above mentioned indicators of the relaxation seeking interest.

This visitor interest does exist towards almost each bird habitat seen as virtual landscape of the Veluwe, but it does not exist towards the Wheatear bird habitat seen as virtual landscape of that area. This is based on the abstract categorization called Exist/Not Exist/Cannot be Judged. But according to the percentages which are constructed in column diagram (see Figure 11), relaxation seeking interest does attract the highest amount of test subjects to the Black Woodpecker-, Nightjar-, Kingfisher bird habitats seen as virtual landscapes. All of them attract 90%-90%-90% of the test subjects. This also means that these are the highest columns (percentages) in Figure 11 related to the relaxation seeking interest, but all the other columns are high. Except the Wheatear bird habitat seen as virtual landscape, since its percentage is 50%. Therefore, according to the abstract categorization the existence or not existence of the relaxation seeking interest cannot be judged towards Wheatear bird habitat seen as virtual landscape of the Veluwe.

The *recreation seeking interest* towards the Wryneck bird habitat seen as virtual landscape of the Veluwe is 97% among the test subjects. Based on the P-value of this visitor interest, the Wryneck bird habitat of the Veluwe is the most important bird habitat seen as virtual landscape. This is explained from the aspect of the whole Veluwe by the statement of Van der Heide (2005) in the Ministerie van Landbouw, Natuur en Voedselkwaliteit (2006), since he says that every year more than 20 million people go to the Veluwe as day-trippers. Related to this visitor interest, the answers from the test subjects have been gathered by 5 indicators formed in questions. Therefore, the 97% recreation seeking interest towards the Wryneck bird habitat seen as virtual landscape of the Veluwe is built upon the indicator of walking, cycling, doing physical exercise, outdoor activities such as dog walking on leash Etc. But, the bird watching is also included in the outdoor related indicator of this visitor interest by the "Etc." according to the view of the MSc thesis. This can be understand partly by the discussion of Harrison (1979) and Butler (1984) in Hvenegaard *et al.* (1989) who refer to the bird watching as the fastest growing outdoor activity which is wildlife related. Besides, the 97% of the test subjects' answers related to the recreation seeking interests' indicators are also built upon Landsberg *et al.* (2001) who mention horseback riding, cycling and dog walking on leash as outdoor activities. It is also underpinned by Hanqin (1999) who refers to do some exercise as a kind of relaxation, but this contradicts with the view of the MSc thesis, and thus it is taken into account as part of the recreation seeking interest. Furthermore, the 97% shows the recreation seeking interest towards the Wryneck bird habitat seen as virtual landscape of the Veluwe for which this amount of test subjects (97%) would even be willing to pay extra money for seeking these above mentioned recreation related activities at the Veluwe's Wryneck bird habitat seen as virtual landscape. For them as visitors, it would matter where they would go in the Veluwe to search for the relaxation.

The recreation seeking interest does exist towards every bird habitat seen as virtual landscape of the Veluwe according to the abstract categorization. The percentage behind every bird habitat is different, but high as the Figure 11 shows. The lowest percentage is 60% and it is related to the Tawny Pipit bird habitat seen as virtual landscape. The 87%, three times occurs which shows that the recreation seeking interest is related in this high percentage to three bird habitats such as Black Woodpecker-, Honey Buzzard-, Nightjar bird habitat seen as virtual landscape.

Amazement seeking interest is 57% towards the Wryneck bird habitat seen as virtual landscape of the Veluwe. Concerning the amazement seeking interest, there is no most important bird habitat seen as virtual landscape based on the P-value. Therefore, the conclusion can be drawn that it does not matter where the 57% of the test subjects would search for the amazement related experiences as visitors in the Veluwe. But the ANOVA-table of amazement seeking interest (see Appendix 8) shows that the two lowest percentages are linked to the Wheatear- (37%), and to the Tawny Pipit bird habitat seen as virtual landscape of the Veluwe. This visitor interest is underpinned by the mode of rapture from Lengkeek (2001) which is correspond with Jacobsen (1996) who states that there are visitors who would like to delight in something and they seek for that kind of experience (Lengkeek, 2001). Cohen (1979) calls this experience as experimental mode. Besides, the recreational mode of Cohen (1979) in Lengkeek (2001) seems to refer to the recreational activities, but I argue that it also belongs to the amazement seeking interest. The reason of this is that the name and its content contradict with each other. Cohen (1979) refers to pleasure experiences as well (Elands and Lengkeek, 2000), which also belong to the amazement seeking interest in the MSc thesis. There are 5 indicators formed in questions which are attached to this visitor interest. The "Yes" answers given for each of them provide the 57% of the amazement seeking interest towards the Veluwe. Based on the "Yes" answers, this percentage of the test subjects also would like to go to the Veluwe in order to watch birds when they sit in their nest or when they fly out from their nest. This is related to the mode of rapture from Lengkeek (2001) like all the other indicators in this visitor interest category. These test subjects also would like to enjoy how birds feed their chicks and themselves. They also would like to delight in how high and fast birds fly. Furthermore, the test subjects also would like to go to the Veluwe to enjoy how large and tiny the plants or how shallow or deep is the pond of the landscape of the Veluwe. The last indicator contributes also to that 57% of the test subjects who would be attracted as visitors to the Veluwe in such a way that they even would be willing to pay extra money in order to take part in the above mentioned activities related to the rapture mode of Lengkeek (2001).

The abstract categorization shows related to the amazement seeking interest that it does exist only towards the Wryneck- (57%), and towards the Kingfisher (53%) bird habitat seen as virtual landscape. The reason of their existence is that their percentage is higher than 50%. Towards the Black Woodpecker-, and Honey Buzzard bird habitat seen as virtual landscape, the amazement seeking interest cannot be

judged, since both of them are 50%. But towards all the other bird habitats seen as virtual landscape, the amazement seeking interest is less than 50% which means that it does not exist towards them within the Veluwe. But if only the percentages are analysed based on the Figure 11, than it shows that these change between 37% and 57% and therefore the amazement seeking interest towards the Veluwe's bird habitats seen as virtual landscapes are not high.

Learning seeking interest is 73% towards the Wryneck bird habitat seen as virtual landscape of the Veluwe which means that this percentage of the test subjects would be attracted as visitors to the Veluwe by the pulling power of this visitor interest. There is no significant difference concerning learning seeking interest among virtual landscapes based on the P-value which means that there is no most important bird habitat for the test subjects. Therefore, the 73% of the test subjects can be seen as such which is attracted by the learning seeking interest to the whole Veluwe. This percentage is built upon the "Yes" answers given for the five questions (also called indicators). The answers for these indicators contribute to this percentage by showing that this amount of test subjects would go to the Veluwe in order to learn about nature, to smell the flowers, to learn about history, and to learn also about birds. Besides, this amount of test subjects would be even willing to pay additional money for these things in the Veluwe. The strongest underpinning argument of this visitor interest is provided by Pan and Ryan (2007) who write about such people who go to an area to learn about nature. I argue for this category, since this is general statement without mentioning any specific area. Therefore the Veluwe also fits into this without any changes. From the theory, Hanqin (1999) underpins this visitor interest by increasing the knowledge about foreign destination, but I argue against this latter part since it contradicts with the MSc thesis. The reason is that the test subjects are Dutch and the Veluwe is in the Netherlands. The most general statement is, however, derived from Beh and Bruyere (2007) who mention learning without naming object or place. This fits into the learning seeking interest towards bird habitats seen as virtual landscapes, and towards birds as well. However, Beh and Bruyere (2007) also refer to learning about savannah ecosystem, which partly also suits to the MSc thesis. However, the Veluwe contains different ecosystems, but therefore visitors can learn about ecosystems of the 10 breeding birds' habitat. The other contributing thought is again from Beh and Bruyere (2007) who mention the learning of history of Kenyatta parks, but it does not totally fit into this context, since the MSc thesis is about the Veluwe. The same is the case with the learning about the history of South and North Korea discussed by Bigley and Lee *et al.* (2010). Cultural history also attracts visitors to the Veluwe according to Van der Heide *et al.* (2008). For example, out of the 20 Dutch National Parks the two oldest ones are situated in the south of the Veluwe named The Hoge Veluwe and The Veluwezoom (Nationaal Park, 2012).

Looking at the abstract categorization, Table 9 shows that learning seeking interest does exist towards each bird habitat seen as virtual landscape of the Veluwe, but their percentage which is behind them is shown in Table 10 and Figure 12. According to

them, the learning seeking interest does change between 57% and 73%. In most of the cases, it is 57%, but the 60% is also quite common. Since there is no most important landscape attached to the learning seeking interest based on the P-value, therefore the all the Veluwe is considered to be important for this visitor interest based on the "Yes" answers of 73% test subjects. This percentage can be used, since the most important virtual does not have in this case.

Scientific interest is 53% towards Wryneck bird habitat seen as virtual landscape of the Veluwe. The most important virtual landscape does not exist concerning this visitor interest, but this is the highest percentage based on the P-value of scientific interest. Therefore, the 53% scientific interest can be understood towards the whole Veluwe because of the lack of significant difference. The five indicators attached to this visitor interest shows that the test subjects would like to collect data, and do observation related to its plants, birds, study programme, and to do experiment in this above mentioned extent. Besides, they would even be willing to pay in order to participate in these above mentioned activities in the Veluwe. The mastering from Lengkeek (2001) suits into the context of scientific interest, since it is about opening up new things. I argue for this, because by doing research unknown things have become known. Lengkeek (2001) also mentions from this aspect that hobby can become fulfilment in life. I argue that this can be the case concerning research as well. From Pan and Ryan (2007) the skills mastery explains the scientific interest, which contains using the physical abilities and skills, as well as challenging the abilities. Furthermore, the intellectual category from Pan and Ryan (2007) also contributes to this visitor interest in the MSc thesis which is explained by the discovering new places and things discussed by them. Within the Veluwe, The Hoge Veluwe and the Veluwezoom can be mentioned which were established in order to protect and develop nature and landscape. But next to this fundamental aim these parks are place for research (Nationaal Park, 2012).

Based on the abstract categorization, the scientific interest exists only towards the Wryneck bird habitat seen as virtual landscape. Towards the other 9 bird habitats seen as virtual landscapes, it does not exist because in their case, it is always lower than 50%. Since there is no most important bird habitat seen as virtual landscape, than the whole Veluwe is not considered to be important for scientific interest in the extent of the highest percentage which is 53%. But the scientific interest is more important than the creativity interest.

Creativity interest is 37% towards the Nightjar landscape of the Veluwe. The Nightjar landscapes is not considered to be the most important landscape concerning the creativity interest, but the highest amount of visitor interest does belong to it. There are five indicators which have been formulated in question format for this visitor interest. The answers show that 37% of the test subjects would like to go to the Veluwe in order to use their imagination concerning landscape architecture or

planning, and also concerning organizing public events. Besides, the answers of the test subjects also show that they would like to gain inspiration in the Veluwe. The reason of taking the Veluwe and not the Nightjar bird habitat, since there is no significant difference among the bird habitats of the Veluwe, therefore all the bird habitats seen as landscapes are seem to be similar to the test subjects related where they would like to search for creativity related experience. This is supported by using of imagination, as well as gaining of inspiration from Pan and Ryan (2007). However, this latter one is used together by them with the refreshing the mind, but I argue that it belongs to the relaxation seeking interest. Kelly and Nankervis (2001: 59) make a comparison between landscape and art. By doing so they reveal that these are similar to each other, since people know what they like, but they do not know the reason of it. According to Graeme and Colin (2008: 114) authors and writers can get inspiration from landscape for imagination and creative expression.

The creativity interest does not exist towards none of the bird habitats seen as virtual landscapes of the Veluwe based on the abstract categorization. The reason is that their percentage is always under 50% and changes between 17% and 37%. The highest percentage related to the creativity interest is 37%, therefore - having no most important bird habitat seen as virtual landscape – this can be considered not only towards the Nightjar bird habitat seen as virtual landscape, but towards the whole Veluwe.

Economic interest is 63% towards the Black Woodpecker bird habitat seen as virtual landscape of the Veluwe. In the questionnaire based interview, there are 5 questions representing the indicators of the economic interest. The answers given by the test subjects for them, has provided the percentage of the economic interest towards this named bird habitat. Since the ANOVA-table of economic interest does not show significant difference, therefore this visitor interest is related with the 63% towards the whole Veluwe. The reason is that there is not much difference where test subjects would search for economic interest related experience among the bird habitats in the Veluwe. This visitor interest is approached from the aspect of earning of money and can be placed into the theoretical context by referring to several authors such as Beunen and Vries (2011) who state that visiting the attractions is important economic activity. This is parallel with the line of thoughts of Manfredo (2008) and Kelly and Nankervis (2001: 61), since they also refer to its economic impact. Nunes and Van der Heide *et al.* (2005) state concerning the recreational benefit of the Veluwe that it is around 0,06 euro and 0,45 euro per each visitor. They write this as an estimation which is yearly amount based on their calculation. According to Shackley (1996: 127) the value of wildlife can be seen by estimating of gate fees, money spent on accommodations, food, generated employment (Holden, 2000: 121). There is another aspect with which the economic interest can be underpinned. This is the visiting the site in order to conserve it for the reason of getting payment for its conservation (Ryan *et al.*, 2003). This has been also present among the indicators of this visitor interest and thus part of the 63% of the test subjects who would be willing to earn

money by conserving the Veluwe's Black Woodpecker bird habitat seen as virtual landscape. However the economic interest is also underpinned by the landscape value about which Vining *et al.* (1984) state that it can be improved by developing some living places. By this latter statement, the indicator has been established in the research instrument in such a way which has also contributed to the 63% of the test subjects would like to earn money by building an ecologically accepted small house at the Veluwe's Black Woodpecker bird habitat seen as virtual landscape. In the research instrument the Veluwe as the name of the certain area has still been hidden in front of the test subjects, but the photos are about the Veluwe. The economic interest towards birds is also part of the economic interest related indicators which would attract the test subjects as visitors to the Black Woodpecker bird habitat of the Veluwe. This is underpinned by Juricic and Jokimäki (2001) who mentions three possibilities for conserving birds such as environmental education, management and research. In the research instrument, these are represented by the indicators which ask the test subjects about their answer for the opportunity to earn money by giving bird watching tour as part of the environmental education. The second indicator based on Juricic and Jokimäki (2001) has asked the test subjects about earning money by doing research for conserving birds. The third indicator from this aspect has been established by asking them about earning money by developing visitor management plan. These mentioned 5 indicators altogether have given the 63% economic interest towards the Veluwe. Therefore, based on the ANOVA Single Factor analysis of economic interest having no most important virtual landscape, the whole Veluwe is important for the test subjects related to their economic interest. This visitor interests' attracting power is high – between 50 and 63% - towards the Veluwe. Besides, it is very similar at each bird habitat seen as virtual landscape of the Veluwe. The abstract categorization shows that the economic interest cannot be judged towards 2 bird habitats seen as virtual landscapes of the Veluwe which is the Red-backed Shrike-, and the Kingfisher bird habitat seen as virtual landscape. But towards all the other bird habitats seen as landscapes of the Veluwe, economic interest does exist. Concerning 2, it cannot be judged which shows that its percentage is exactly 50% towards those bird habitats. But related to the other 8 bird habitats, it is more than 50%. According to Figure 12, economic interest is between 50% and 63% which means that the Veluwe is quite important for the economic interest. It would attract lot of test subjects as visitors to the Veluwe.

Other interest is 63% towards Wryneck bird habitat seen as virtual landscape of the Veluwe. This visitor interest is also not significant. Having no significant difference among bird habitats seen as virtual landscapes for the test subjects where they would like to seek for other interest related experiences, therefore the whole Veluwe is taken, and not just the Wryneck bird habitat, to which the 63% is related. The answers for the five indicators related to this visitor interest shows that this amount of test subjects would go to the Veluwe as visitors to have stories to tell to people, to seek new landscape than what it is in their ordinary environment, to feed birds in

order to increase their activity level, to find excitement. Besides, this 63% of the test subjects would even be willing to pay for these activities in the Veluwe. This also can be underpinned from the literature by referring to Lengkeek (2001) concerning the mode of interest about which he refers to the stories. This has been put into the questionnaire based interview by asking the test subjects if they would like to go to the area to have stories to tell people. Besides, Beh and Bruyere (2007) by referring to the experiencing something new also contribute to the other interest in the MSc thesis. Just like the finding of excitement from Hanqin (1999) does.

The other interest is somewhat different from the economic interest, since it has a much lower percentage which is 33% related to the Wheatear bird habitat seen as virtual landscape of the Veluwe. But all the other percentages are 50% or even higher. Related to the Stonechat-, Tawny Pipit-, and Red-backed Shrike bird habitat seen as virtual landscape, the existence or not existence of the other interest cannot be judged, since it is exactly 50%. But concerning the other 6 bird habitats seen as virtual landscapes, it does exist because it is higher than 50%. Figure 12 shows that other interest is between 33% and 63%. Since the 33% occurs only towards one bird habitat, but the others are 50% or even higher towards the other bird habitats, therefore it can be said that the other interest would attract test subjects as visitors to the Veluwe in a quite high percentages.

The conclusion related to the Veluwe based on the abstract categorization has been pointed out that the amazement seeking interest, creativity interest and scientific interest do not exist. The reason of their not existence is that their percentage is less than 50%. But as it was said earlier, the amazement seeking interest does exist towards Wryneck-, and Kingfisher bird habitat seen as virtual landscape. The scientific interest does exist towards Wryneck bird habitat seen as virtual landscape of the Veluwe, while the creativity interest does not exist towards any bird habitat seen as virtual landscape of the Veluwe.

5.2. Future Research and Practical Application

- The same research could be done concerning other attractions of the Veluwe such as restaurants, museums, zoos, car parks, bicycle tracks, walking paths, other animals such as Sand Lizard Etc.

- The research could be done concerning larger areas of the Veluwe such as national park: Hoge Veluwe, nature reserve: Veluwezoom, North, South, East, West Veluwe Etc.

- Larger sample could be applied and do the research concerning the Dutch students living in Wageningen or the whole Dutch population of the Netherlands.

- The geographical area of the research could be the whole Europe using the European set of bird habitats seen as virtual landscapes, including their birds.

- The MSc thesis with the questionnaire based interviews - related to imagined visit of the certain area which is shown by the photos of the power point presentation - can be considered as a pilot study for future research. Further research could be done not in "laboratory" which is situated in the Leeuwenborch building, but in real circumstances with real visitor survey and visitors arriving to the bird habitats seen as virtual landscapes.

- The experiment could be done in professional environment such as Wageningen University and Research Centre involving researchers, post-doctors, professors at any level and of any type Etc. The research setting would have to be changed for example related to screening questions, instead of e.g. ringing the doorbell appointments should be made personally or by phone with WUR staff in working hours.

- The research could be done among nations comparing the visitor interests according to their direction towards bird habitats seen as virtual landscapes, including birds based on cross-cultural visitor sample. By doing so, the statement of Jacobs (2006) could be confirmed which says that visitors' experiences related to landscapes are influenced also by the cultural characteristics (Elands and Van Marwijk, 2008: 61).

- The MSc thesis findings could be a source of ideas in the form of scientific article for further improvement of the www.myplacetobe.eu website within the ESCAPE project at Alterra Research Centre in the Netherlands.

6. Discussion

Within this chapter, the results of the quantitative analysis concluded in the sub-chapter 4.4. are in relation with the theoretical framework of the MSc thesis. According to the MSc thesis guideline of the Social-Spatial Analysis Chair Group, arguments are given against and for the findings, and literature findings. This should happen in the context of the scientific objective, research question and theoretical framework. Finally shortcomings and special circumstances are discusses which might have been impact on the findings (SAL, 2008).

During the proposal period of the MSc thesis, the expectation has been laid down which says that different visitor interests belong to different bird habitats seen as virtual landscapes. The incorrectness of the expectation has been proved by statistical analysis. The ANOVA-tables in the Appendix 8 shows that the same visitor interests (all the 9) belong to the same bird habitats seen as virtual landscapes (to all the 10) of the certain area. There is no difference concerning this aspect, but there are differences in percentages (see ANOVA-tables in Appendix 8). Although, when the expectation is analysed based on the abstract categorization, actually the expectation is true in certain extent, but not in each case. The reason is that there are visitor interests – the recreation seeking-, and the learning seeking interest - which belong to all the 10 bird habitats from this aspect. The creativity interest does not belong to any of them from this view, but all the further 6 visitor interests do belong to different bird habitats in a certain extent based on Table 9.

6.1. Discussion about the Research Question including the Sub-Research Questions

As the answer for the main research question shows, there are nine visitor interests according to their direction such as general interest, relaxation seeking interest, recreation seeking interest, amazement seeking interest, learning seeking interest, scientific interest, creativity interest, economic interest and other interest towards bird habitats seen as virtual landscapes, including visitor interests towards birds as well. These have become the centre of the MSc thesis by framing the 9 new sub-research questions mostly based on the literature. The percentages related to the visitor interests are given by the result of the ANOVA Single Factor analysis which has been done by using the answers from the 30 test subjects provided during the questionnaire based interviews. These percentages within the discussion chapter are related to the most important bird habitats seen as virtual landscapes based on the visitor interests according to their direction. When the P-value shows that there is no most important virtual landscape concerning a visitor interest, then the highest percentage is presented related to that visitor interest. Concerning the visitor interests towards birds, always the highest percentage has taken into account.

General interest towards the most important bird habitat seen as virtual landscape would attract 83% of the test subjects as visitors to the certain area. This percentage refers to the Kingfisher landscape. This can be placed into the context of the literature by referring to Beh and Bruyere (2007) who mentions the reason of being close to nature as a pull factor. The reason of the site visiting according a quotation from Nelson *et al*. (2004: 7) is the attractive living area. General reason for site visiting is pleasure related according to Cohen (1974) in Dann (1981). But this latter argument contradicts with the view of Cohen (1979), since according to that recreational mode is which gives pleasure. But in the MSc thesis' context, recreational mode belongs to the recreation seeking interest.

The test subjects' 83% would go to the certain area attracted by the general interest towards bird habitats seen as landscapes, but they would be attracted also by this visitor interest towards birds. The reason for going there is underpinned by the statement which has been quoted by Nelson *et al.* (2004: 7) and is about liking of nature including forests, and wildlife. Another quotation also supports the general interest towards birds which states that nature area attracts birds which is the most important reason for choosing the living place (Nelson *et al.*, 2004: 7).

Attracted by the relaxation seeking interest, 90% of the test subjects would go to the certain area. This percentage is related to the Black Woodpecker-, Nightjar-, Kingfisher bird habitats seen as virtual landscapes. These 3 bird habitats are considered as the most significant bird habitats seen as virtual landscapes in the certain area based on the ANOVA-table of relaxation seeking interest. From the literature, this reason of site visiting is underpinned by Kelly and Nankervis (2010: 60) who link the sense of peace, tranquillity, running water and bird songs to it. Besides, it is also supported by Pan and Ryan (2007) who refer to the same interest, but with different concepts such as contemplation, seeking of tranquillity, physical relaxation, refreshing the mind, being in calm atmosphere and relaxing mentally. With this, the categories of Hanqin (1999) also correspond which are about escaping, relaxing or resting physically. Besides, going on holiday is also the same with the relaxation seeking interest. This is also supported by the diversionary mode of Cohen (1979) in Elands and Lengkeek (2000) and also by the change of Cohen (1974: 534) in Dann (1981).

Relaxation seeking interest towards birds is also included in the 90% in such a way that this amount of test subjects would be also attracted by this visitor interest towards birds to the certain area. Another contradictory view which can be attached to this visitor interest is related to Pan and Ryan (2007). According to them, the category of refreshing the mind and gaining of inspiration is one. But in the context of the MSc thesis, only the refreshing of the mind belongs to the relaxation seeking interest.

Attracted by the recreation seeking interest towards bird habitats seen as virtual landscapes, 97% of the test subjects would go as visitors to the certain area. But this

percentage is linked to the Wryneck bird habitat seen as virtual landscape. This is the most relevant virtual landscape related to this visitor interest based on its P-value (see ANOVA-Table 13 in Appendix 8). It refers to that for these test subjects it does count at which bird habitat they would search for the recreation related experiences in the certain area. In order to place it into the context of the theoretical framework, the recreational mode of Cohen (1979) has to be mentioned. Being healthy from Pan and Ryan (2007), and the mode of amusement of Lengkeek (2001) also underpin this visitor interest. However, I argue against the line of thoughts of Lengkeek (2001) concerning the mode of amusement, since he also deals with outdoor activities by mentioning e.g. the merry-go-round, the Big Wheel. But since he would like to avoid confusion with the recreational mode of Cohen, therefore he does not mention them as outdoor activities. But in the MSc thesis, the mode of amusement could not be applied in a way how Lengkeek uses it, therefore it is used for example as watching of strange bird like Nightjar. Since Lengkeek (2001) refers to see strange creatures in the context of mode of amusement.

However, concerning birds the ANOVA-tables have not been constructed, therefore related to the recreation seeking interest it is linked to the certain area. The 97% of test subjects would go to the certain area attracted by the recreation seeking interest towards bird habitats seen as virtual landscapes, and also because of the recreation seeking towards birds. This is visible from the "Yes" answer given for the indicators of this visitor interest. Hereby, some supporting thought are presented. According to Harrison (1979) and Butler (1984) bird watching is among the fastest growing recreational activities related to wildlife in North-America (Hvenegaard *et al.*, 1989). It involves around 20-30 million visitors year by year as it is said e.g. by More (1979), and Lyons (1982) in Hvenegaard *et al.*, (1989). The NPG Facts and Figures (1999) show that in 1989, the population of North-America was 246,819,230 people. When the average of the 20-30 million visitors (25 million) is taken and compared to the visitors' number from 1989, it points out that 10,13% of the population of North-America was involved in bird watching in 1989. Besides, Jacquemot and Filion (1987) in Hvenegaard *et al.* (1989) state that in the area of Canada, minimum 13,1% of the inhabitants participated in special tours related to birds.

By the amazement seeking interest towards bird habitats seen as virtual landscapes, the 57% of the test subjects would go to the certain area as a visitor. This percentage originally is related to the Wryneck bird habitat seen as virtual landscape, but since this is the highest percentage and most important virtual landscape do not exist therefore it is linked to the whole certain area. The most relevant bird habitat seen as virtual landscape does not exist related to this visitor interest because the P-value is higher than 0,05. From the literature research, the recreational mode of Cohen (1979) in Elands and Lengkeek (2000) because of its name seems to be contradicting with this visitor interest. But because of its content which is partly about seeking of pleasure, it does fit into the amazement seeking interest. Wickens (2002) also argues that searching for a site is built upon pleasure seeking.

The 57% of the test subjects are attracted to the certain area, by the amazement seeking interest towards bird habitats seen as virtual landscapes, and also by this visitor interest towards birds. This visitor interest can be placed into the theoretical context by referring to Jacobsen (1996) who writes about visitors going to an area with the desire to delight in something meaning that they seek this type of experience (Lengkeek, 2001). Besides, it is called as rapture by Lengkeek (2001). This line of thought is similar to the statement of the European Commission (2004) which argues that visitors have joy and satisfaction by watching or listening birds. The amusement seeking interest of Lengkeek (2001) also parts of the amazement seeking interest, since it is about such experiences which can be acquired e.g. by watching a strange creature. In the context of the MSc thesis, it can refer e.g. to visit the certain area in order to watch the Nightjar, so to see that kind of strange bird in its natural habitat seen as virtual landscape.

By the learning seeking interest, 57% of the test subjects would go to the certain area, but this is related to the Wryneck landscape specifically. The Wryneck bird habitat concerning this visitor interest is regarded as the most important bird habitat in the certain area, based on the P-value of ANOVA single factor analysis has pointed it out. This can be placed into the context of the literature by referring to the learning about nature from Pan and Ryan (2007) which is also mentioned by Beh and Bruyere (2007). Learning about the Wryneck bird habitat seen as virtual landscape can take a historical approach as well based on Beh and Bruyere (2007) who frames it as learning about the history of park. But not only they, who mentions this aspect, since Bigley, Lee *et al.* (2010) also refer to the learning about history. Hanqin (1999) writes simply about increasing the knowledge about the area.

The test subjects' 57% who are attracted by learning seeking interest towards bird habitats seen as virtual landscapes of the certain area, are also attracted by this visitor interest towards birds as well. This aspect is underpinned by learning about birds from Beh and Bruyere (2007) which is also included among the indicators of the learning seeking interest in the questionnaire based interviews.

By the creativity interest towards Nightjar bird habitat seen as virtual landscape, 37% of the test subjects would go as visitors to the certain area. This is the highest percentage concerning this visitor interest, but it is not the most important bird habitat. That is not exist in the case because creativity interest because the value of the P-value is higher than 0,05. Landscape is like art according to Kelly and Nankervis (2001: 59), since visitors know what they like, but they do not know the reason of it. To support this visitor interest, Pan and Ryan (2007) have to be mentioned, since they approach it from the aspect of using the imagination, and gaining inspiration. They use the gaining of inspiration together with the refreshing of the mind, but this latter part of it does not belong to the creativity interest. Graeme and Colin (2008: 114) state that many artists and writers have found qualities at protected areas which are inspiring them.

The 37% of the test subjects who are attracted by the creativity interest towards bird habitats seen as virtual landscapes to the certain area, are also attracted by the creativity interest towards birds. The EC Europe (2012) states that birds provide inspiration by watching them as well as by listening to them. Manfredo (2008) supports this view by referring to a woodpecker in such a way which would fit into a novel or a poem.

Economic interest is also considered as one of the visitor interests according to their direction which has attracting power and thus it would attract the 63% of the test subjects as visitors to the certain area. However, this percentage is only linked to the Black Woodpecker bird habitat seen as virtual landscape. This is the highest percentage related to the economic interest, but does not considered to be the most significant virtual landscape for the test subjects because the P-value is larger than 0,05. Therefore, the result of the economic interest can be linked to the whole certain area showing that test subjects see opportunity for earning money at each bird habitat seen as virtual landscape. This aspect of visitor interests' direction can also be placed into the theoretical context by referring to going to the area because of education as Bigley, Lee, *et al.* (2010) refer to it. Besides, the virtual landscape value about which Vining *et al.* (1984) discuss also helps to put the newly defined economic interest into the theoretical framework. The scenic value of an area can be increased by some living place developments (Vining *et al.*, 1984). According to Kelly and Nankervis (2001) landscape has value to the sector dealing with visiting the attractions, and therefore based on the MSc thesis the certain area's bird habitats seen as virtual landscapes are valuable. Manfredo (2008: 2), Beunen and Vries (2011) underpin this statement by stating that visiting the attractions is important for economic aspect. About the certain area, the Ministrie van Landbouw, Natuur en Voedselkwaliteit (2006) states that the turnover of the sector dealing with outdoor activities is around 1 billion euros turnover yearly. Visitors can go to the certain area by nature conservation related economic interest as well according to Ryan *et al.* (2003). They discuss about the conservation of the area in order to get payment for conservation.

The 63% of the test subjects who are attracted by the economic interest towards bird habitats seen as virtual landscapes to the certain area, are also attracted by the economic interest towards birds. This latter aspect of the economic interest is supported by Juricic and Jokimäki (2001) who discuss about bird watching tour in order to provide environmental education. Besides, they also discuss about research for conserving birds.

By the other interest towards Wryneck bird habitat seen as virtual landscape, 63% of the test subjects would go as visitors to the certain area. Since the P-value is bigger than 0,05, therefore there is no most relevant virtual landscape. From the literature, this visitor interest is underpinned by the mode of interest from Lengkeek (2001) who discusses about stories which have attracting power. The category of being daring

and adventuresome is part of novelty category of Hanqin (1999), and the MSc thesis does consider it as part of the other interest. Discovering of new areas as well as things from Pan and Ryan (2007), finding excitement from Hanqin (1999), and seeking of adventure from Bigley, Lee *et al.* (2010) also support this visitor interest.

The 63% of the test subjects who would go to the certain area attracted by the other interest towards bird habitats seen as virtual landsapes, are also attracted by the other interest towards birds. This latter part might be related e.g. to the habitat of the Honey Buzzard which is the Honey Buzzard bird habitat seen as virtual landscape of the certain area. This can be underpinned by Lengkeek (2001) who discusses about the mode of interest. It is related to birds as well, since for example the Honey Buzzard can cause fear towards the visitors. Its wingspan is 142 cm, its length is 56 cm, and its weight is 730 g (RSPB, BTO and Huntley *et al.*, 2007). Besides, the other interest towards birds related to the certain area is also underpinned by Moss and Esson (2010), since they discuss about feeding of birds in order to increase their activity level for the sake of the visitor management.

6.2. Discussion about the Possible Shortcomings and Special Circumstances

Within this sub-chapter, there is discussion about the extent how the findings have been influenced by the methods used in the MSc thesis. This could be caused by possible shortcomings and special cirtumstances (SAL, 2008). One example which have been experienced during one questionnaire based interview is that a car alert was alerting for a while, therefore some of the questions had to be asked again from the test subject in order to check its correctness. The visitor interests towards birds in the questionnaire based inteview do not contain the same amount of questions as the visitor interests towards bird habitats seen as virtual landscapes. Since the process of data gathering has been a kind of cognitive interviewing, therefore the length of the questions have been changed during the survey period as well in order to shorten the time of the questionnaire based interviews. Besides, grammatical errors have been also corrected during the questionnaire based interviews in the survey period as well. The last question under almost each visitor interest (except under the economic interest) is about the willingness-to-pay about the mentioned activities. But when the questions about the willingess-to-pay have been asked from the test subjects, the MSc thesis writer had to put the right activities into the questions for which the test subject said "yes". But when the test subject said "yes" for each activity of the visitor interest, the activities have not been put into the sentence, but the questions about the willingness-to-pay have been asked simply by the phrase "for these things" referring to all the activities under the visitor interest. The test subjects could see the MSc thesis title in the beginning of the power point presentation of the bird habitats, therefore this might have affected their answers. The 8th and the 9th bird habitat slides have contained more photos. The eighth bird habitat slide contains 3 photos referring to the Tawny Pipit landscape, while the ninth bird habitat slide contains 2 photos referring to the Red-backed Shrike landscape. To the first PhD student test subject, that has not been told in the beginning that all the

photos are about a specific area. It has been told to this PhD student just at the tenth bird habitat slide, since this PhD student was thinking that the photo is about a park in a green area or a park in a city. But this test subject provided the same answers concerning each bird habitat slide, only this slide made the test subject think about the place.

6.3. Discussion on Feedback to the Theory

The MSc thesis is an exploratory study, since it has established a new categorization of visitor motivations from the aspect of visitor interests' direction. There has been not written scientific article about this categorization, therefore the percentages which have been derived by the MSc thesis are all feeding the theory with empirical data. Furthermore, this sub-chapter is built upon the problem statements in order to prove them and show solutions by the MSc thesis for them. According to Cooper *et al.* (1993: 23) site visit motivations can be linked together in a complicated way and there can be several motivations (Hall and Page, 2006: 72). The MSc thesis has pointed out that all the visitor motivations according to their direction is related to the certain area, but their percentages are differ from each other. The main visitor motivation towards the certain area which would attract 97% of the test subjects as visitors is the recreation seeking interest. The next visitor interest which is also very strong with its 90% is the relaxation seeking interest. By this visitor motivation, 90% of the test subjects out of 30 would go in very high percentage to the certain area as visitors. These are the most dominant motivations, but from them the relaxation seeking interest attracts the highest percentage of the test subjects (97%) to the certain area. By this last statement, the comment of Pearce (1993a) is proved which has been presented by Hall and Page (2006: 73) and says that there is perpahs one motivation which is dominant at once. As it is revealed by Pesonen and Komppula *et al.* (2011) those researches which deal with the pull factors are very much site-determined. In the MSc thesis, therefore the chosen site is presented by the MS Power Point presentation's 10 bird habitats seen as virtual landscapes. Cooper *et al.*, (1993: 23) states that site visiting motivations can contradict with each other (Hall and Page, 2006: 72) which have been visible in such a way that in the literature for example Beh and Bruyere (2007) writes about escape as one of the visitor motivation factor, but in the MSc thesis it is part of pull factors. The escape of Beh and Bruyere (2007) which I argue that it seems to be inner motivation of the visitors, but in the MSc thesis it is conceptualized as objective phenomenon as all the 9 visitor interests according to their direction. This has been established by the new categorization of visitor motivations from this new aspect in current thesis report. As it is said by Hirschman (1984) the experience seeking as an overall phenomenon has been put rarely in the focus, but this MSc thesis has put it into the focus of the research. All the 9 visitor interests according to their direction which have been identified in the MSc thesis can be seen as experiences which the test subjects would search for as visitors in the certain area. Since the research is done "before visiting the site" simulated by a power point presentation with photos about the certain area and with bird songs,

additionally the name of the certain area has not been revealed by the data collector during the data gathering, therefore the whole MSc thesis is about experience seeking. This is underpinned by Cosgrove (2003) who states that landscape can also be an experience (Lennon 2006: 454). Therefore in the MSc thesis in line with this statement, if the test subjects would like to go to the certain area and visit it, I argue that they would be attracted by the visitor interests' direction which is about searching for those experiences which they have been experienced by the power point presentation with the photos and with the attached bird songs.

Besides, I argue that the MSc thesis has been contributed to the solution of the confusion of the field of visitor motivations by establishing a new categorization based on the direction of visitor motivations. The new categorization has been named as visitor interests' direction and shows that the existing motivations which can be related to bird habitats seen as virtual landscapes. The existing motivation categories have been put under the umbrella of the new categorization, but sometimes changes have been made; Hanqin (1999) deals with push factors and pull factors separately, but in the MSc thesis push factors of Hanqin (1999) also considered as pull factors and thus part of the visitor interests according to their direction. A more detailed example can be seen by explaining that Hanqin (1999) deals e.g. with the category of relaxation within the push factors and under relaxation the following categories are gathered such as getting some exercise, physically resting/relaxing. But in the conceptualization of the MSc thesis relaxation is also pull the test subjects and the category of Hanqin (1999) called getting some exercise is conceptualized as part of the recreation seeking interest in the new categorization. The category of novelty from (Hanqin, 1999) contains being daring and adventuresome which is considered as part of recreation seeking interest in the MSc thesis. The educational purpose of Bigley, Lee *et al.* (2010) is conceptualized as such motivation which is part of the economic interest. This is used in the experiment as the indicator of willingness to earn money by giving bird watching tour as part of environmental education. The environmental education for nature conservation is discussed in Fernandez-Juricic and Jokimäki (2001). These are just some examples related to the changes, but show how the reorganization has happened under the "umbrella" of the new categorization.

According to the Table 13, within the ranking of the visitor interests according to their direction, therecreation seeking interest have the highest percentage (97%). It is specifically related to the Wryneck bird habitat seen as visual landscape of the certain area. The relaxation seeking interest posesses the second highest percentage (90%) towards three bird habitats seen as virtual landscapes. These are the Black Woodpecker-, Nightjar-, and Kingfisher bird habitat seen as virtual landscape. The general interest is the third highest visitor interest with its 83% towards the Kingfisher bird habitat seen as virtual landscape. These mentioned virtual landscapes based on the P-values are the most important bird habitats of the certain area. Since

concerning 6 visitor interests there is no most important bird habitat seen as virtual landscape and these have only such bird habitat seen as virtual landscape which posesses the highest percentage. Therefore these visitor interests are related simply to the certain area. By doing so, to simplify this approach, all the visitor interests can be related to the certain area as a whole, even those where there is most important bird habitat seen as virtual landscape within the 10 bird habitats of the certain area. In this approach, the recreation seeking interest is 97% towards the certain area, the relaxation seeking interest is 90%, the general interest is 83%, the learning seeking interest is 73%, while the economic interest is 63% towards the certain area. The other interest is 63%, the amazement seeking interest is 57%, the scientific interest is 53%, the creativity interest is 37% towards the certain area. Based on the abstract categorization, this last visitor interest in the ranking (creativity interest) with its 37% does not exist towards the certain area, since it is less than 50%. But all the other 8 visitor interests do exist towards the certain area.

In the MSc thesis, the relation between visitor management and Natura2000 has been established by focusing on visitor motivations from the aspect of visitor interests' direction.

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Appendices

Appendix 1: Photos of the Power Point Presentation about The Certain Area's Bird Habitats seen as Virtual Landscapes

Photo 1: Black Woodpecker Bird Habitat seen as Virtual Landscape
Photo Made by Henk Sierdsema, (SOVON, Dutch Centre for Field Ornithology)

Photo 2: Honey Buzzard Bird Habitat seen as Virtual Landscape
Photo Made by Henk Sierdsema, (SOVON, Dutch Centre for Field Ornithology)

Photo 3: Wryneck Bird Habitat seen as Virtual Landscape
Photo Made by Henk Sierdsema, (SOVON, Dutch Centre for Field Ornithology)

Photo 4: Nightjar Bird Habitat seen as Virtual Landscape
Photo Made by Henk Sierdsema, (SOVON, Dutch Centre for Field Ornithology)

Photo 5: Wood Lark Bird Habitat seen as Virtual Landscape
Photo Made by Henk Sierdsema, (SOVON, Dutch Centre for Field Ornithology)

Photo 6: Stonechat Bird Habitat seen as Virtual Landscape
Photo Made by Henk Sierdsema, (SOVON, Dutch Centre for Field Ornithology)

Photo 7: Wheatear Bird Habitat seen as Virtual Landscape
Photo Made by Henk Sierdsema, (SOVON, Dutch Centre for Field Ornithology)

Photo 8: Tawny Pipit Bird Habitat (I.) seen as Virtual Landscape
Photo Made by Henk Sierdsema (SOVON, Dutch Centre for Field Ornithology)

Photo 9: Tawny Pipit Bird Habitat (II.) seen as Virtual Landscape
Photo Made by Henk Sierdsema (SOVON, Dutch Centre for Field Ornithology)

Photo 10: Tawny Pipit Bird Habitat (III.) seen as Virtual Landscape
Photo made by Gilbert Maas (Alterra, Wageningen UR)

**Photo 11: Red-backed Shrike Bird Habitat (I.) seen as Virtual Landscape
Photo Made by Henk Sierdsema (Ambassador at SOVON, Dutch Centre for Field
Ornithology)**

**Photo 12: Red-backed Shrike Bird Habitat (II.) seen as Virtual Landscape
Photo Made by Gilbert Maas (Researcher at Alterra, Wageningen UR)**

Photo 13: Kingfisher Bird Habitat seen as Virtual Landscape
Photo Made by Henk Sierdsema (Ambassador at SOVON, Dutch Centre for Field Ornithology)

Appendix 2: Characteristics of the Final Testing in the Cognitive Interview of the MSc Thesis

1. *Developed Interview Plan*

<u>Place:</u> G511 room in FORUM building of the Wageningen University which has been already reserved for this purpose (Personal communication with FB, Forum-Receptie, 17 April, 2012).

<u>Time:</u> From 15:00 till 18:00 on 18th April, 2012.

<u>Characteristics of the interviewee:</u> Dutch student at the Wageningen University.

2. *Developed Cognitive Testing Protocol*

Since the time for the cognitive interview is limited, therefore an existing interview protocol is used from Jacobs (2010). This document can be used as well as altered by people for any kind of study by proper reference which is asked by Jacobs (2010). An altered version of Jacobs (2010) can be seen in Appendix 3. Besides, Willis (2005) also included in some part of the Appendix 3.

3. *Invitation*

Invitation for the cognitive interview firstly has been said orally, but later on a written invitation was sent out. The invitation letter (see Appendix 4) contains certain information e.g. exact time, date, place, location of the interview Etc.

4. Private administration of the questionnaire

This part of the cognitive interviewing is also achieved in the MSc thesis by inviting only one interviewee for the final testing of the questionnaire in the cognitive interviewing process and asking her to think loudly during the interview in order to see the problems within the questionnaire and to see how the questionnaire works in the reality.

5. Consent with the interviewee

The interviewee who has become sick before the cognitive interview did not come to participate in the appointed time, therefore another consent has been made spontaneously and orally with another Dutch student out of the study sample. The consent about the interview has not written down, but has done orally with the agreement between the interviewer and the interviewee. The consent about the recording of the interview is also oral agreement instead of written one.

6. Testing Report in the Case of a Team

There were only one interviewee who took part in the final testing of the questionnaire in the cognitive interview process which has been discussed in current chapter of the appendix. But the testing was successful with one interviewee as well, since there has been many drafts produced before this testing. This final testing has proved that the questionnaire can be done within 28 minutes according to the counting of Willis (2005: 144) who refers to the 2:1 ratio between field time and cognitive interview time.

7. Revision of the Questionnaire

The questionnaire has been planned to take 45 minutes for answering the questions, therefore new questions have been added. But not been tested in the field because of time constraint. The new questionnaire is planned to take around 1 hour to reply for the questions.

8. Additional Test when there is Time

This has not been done in the context of the MSc thesis based on time limitation. Besides, another reason is the view of Willis (2005: 146) who tries to answer the question when the testing of a questionnaire is finished. It is stated that when all the main problems have been seen and corrected sufficiently. But it is also said that the testing of a questionnaire could go without stopping, but there would still have problems in it. Survey which is perfect does not exist (Willis, 2005: 146).

Appendix 3: Cognitive Testing Protocol in the MSc Thesis

Willis (2005: 142) states that it is important to tell the purpose of the cognitive testing to the interviewee when s(he) arrives to the lab. Jacobs (2010: 1) also emphasises the purpose of the interview in his developed interview protocol. The purpose of the cognitive testing within the context of the MSc thesis is to shorten the time of filling in process, to test visitor interests towards birds as well, and to test the established skip pattern.

Some instructions which are given by Jacobs (2010: 2):

- When the interviewee is approached, take the student card in case it would be requested to identify your student status at the Wageningen University.
- Note of the day, time, place (e.g. Wageningen), location (e.g. campus, Etc.) as well as how long the interview takes.
- Record the interview if it is allowed as well as store the recorded sound file.

Attitude of the Interviewer according to Jacobs (2010: 2):

- Be polite and gentle,
- Show interest e.g. by eye contact based on social rules,
- Do not be too fast during the interview,
- Do not judge the interviewee based on what you hear from her/him,
- Do not direct the interviewee's answers toward a certain direction,
- E.g. by repeating phrases which was told by the interviewee or by nodding, encourage the interviewee to continue his/her talking,
- Express that no right or wrong answers exist if it is applicable,
- Have room for those things which are unexpected,
- Help the interviewee in a gently way to focus on the questions, e.g. when the interviewee stops for a moment concerning a not related issue, then you can tell: 'Thank you very much for this information. At this moment, I would like you to continue to talk about the issue of the questionnaire'.

Sampling (according to Jacobs, 2010: 2):

- In the MSc thesis, the questionnaire would like to capture the variation among visitor interest directions among the test subjects,
- Therefore, such a sample is taken which contains Dutch students from various ages, and both males and females,
- This applies such a sampling method which is purposive, but which is in contrast to the random sampling,
- Do not use close friends, family members as interviewees.

Approaching the Potential Interviewees (Jacobs, 2010: 3):

- If potential interviewee is willing to participate, make an appointment concerning date, time as well as place which fits to him/her.
- Write down the notes about how the potential interviewee was selected, how s(he) was approached and also if the potential interviewee refuses the co-operation.

Text to tell to the potential interviewee when s(he) is approached (according to Jacobs, 2010: 3), but according to Willis (2005: 139) the interviewee is part of study population:

Good morning/afternoon/evening. My name is Adrienn Aranyosi. I am a Leisure, Tourism and Environment MSc student at Wageningen University and I am working on my MSc thesis about Visitor

Interest Directions towards Bird Habitats seen as Landscapes - from Imagination to the Place you should Go - Photo and Sound Based Qualitative Study. For this MSc thesis, I would like to speak with you about your visitor interest directions and hear your thoughts during the interview. The cognitive interview will take around 90 minutes. I would be very glad if you are willing to co-operate to make my MSc thesis successful.

Introduction of the Interview (Jacobs, 2010: 4, Willis, 2005: 142):

Good morning/afternoon/evening. Thank you very much for your co-operation in my MSc thesis. Your contribution is pretty much beneficial for my MSc thesis on visitor interest directions. I estimated that the interview will last around 90 minutes. The information which is provided by you will be treated according to the confidentiality and anonymity requirements. My questions will be about your visitor interest directions related towards the area which I will show by power point presentation. I have a list of questions prepared for you. Note that there are no wrong or right answers: these are really about your visitor interest directions. For brief analysis of this interview, it would be a great help to record it. Do you allow me to record the interview? (If yes, switch on the recorder.). The interview will be conducted in English. Do you have any question at this moment? Shall I start the interview? (Altered based on Jacobs, 2010: 4)

According to Willis (2005: 142-143) I has to tell that this testing is not about collecting of data, but it is about testing of the questions in order to improve them. After reading the questions, please tell your answer. I also would like to hear what you think about them, so please think aloud. You can tell me everything which is in your mind about the questions. I will take notes. Do not be shy to tell when you think that the question is not clear, or when it is difficult to answer, or when it does not make sense at all. It will take around 90 minutes. I also have to highlight to please (1.) focus on the questions instead of the answers, (2.) it is about finding problems, (3.) think aloud as I have said earlier, and (4.) tell your difficulties freely to me. It does not hurt me. Do you have any question by now?

Interview Questions (Jacobs, 2010: 5, Willis, 2005: 142-143):

After telling the introduction, the questionnaire questions will be asked and thus these will be tested during the cognitive interview. Willis (2005: 143) emphases the think-aloud approach of the cognitive interview which will be applied now as well. During the interview, the focus will be on the questions, not on the answers as Willis (2005) requires it. Emphasis will be also on the aim to find problems in the questionnaire. The interviewee will be helped to feel him/herself uninhibited related to express the difficulties (Willis, 2005: 142-143).

Jacobs (2010: 5) highlights that do not have to be afraid of repeating questions. Asking of examples, elaborations and explanations is also mentioned. It is good to be sure that the interviewee gets information as much as possible related to the questions (Jacobs, 2010: 5).

Stopping of the Interview (Jacobs, 2010: 6):

Now, we are almost at the end of the interview. Do you allow me to ask your age? Thank you very much for your co-operation. I gathered all the information which was my goal. Is there any further thing which you still would like to tell to this conversation between you and me? Do you have anything which worries you concerning this interview?

[Switch off the recorder.]

[Write down the length of the interview.]

As I have said in the beginning, the acquired information will be treated according to the confidentiality and anonymity. If you would like to know the results, please check it on-line via Wageningen University library website among published theses when it will be ready. But in order to be able to inform you when it will be there, please give me your email address.

[At home: write down the gender of the interviewee, check the recorded file that it is proper or not, write down your reflections such as how did the interview go, were there questions which were understood wrongly by the interviewee, did the interviewee seem to be open, did s(he) hesitate to give the answer, Etc.]

Transcription (Jacobs, 2010: 7)
Instructions Generally:
- Make ad verbatim (literal) transcription as much as possible, but uh's and ah's do not have to be included or such information which is irrelevant,
- Expression which is not in English, try to translate that into English and do that literally,
- Analysis of the interview is more convenient when it is transcribed according to the standard – format (see below),
- Do not delete the recorded interview after writing down the transcript.

Standard – Format concerning Transcription:
- Name of the interviewee,
- The interview's date, place, location and length,
- Sex, (age if it is provided), nationality of the interviewee,
- Write down your reflection concerning the interview.

Appendix 4: Invitation for the Cognitive Interview – Think Aloud*!
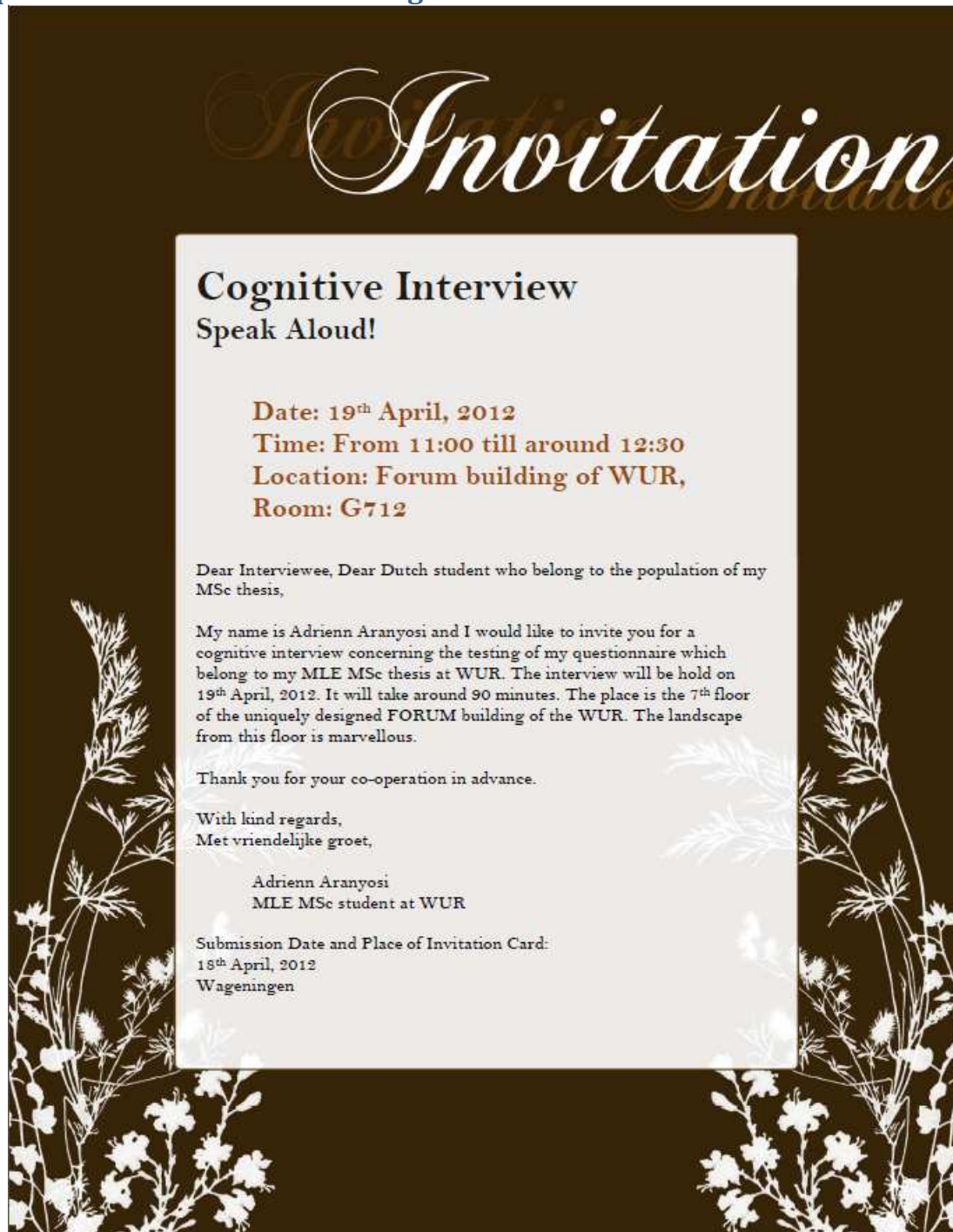
*Correction was taken orally, since the invitation letter contains *"Speak Aloud"* while this final testing of the cognitive interview is about *"Think Aloud"*. That is the point when it is good to share a short comment because of this mistake. Verhoeven and Van Baal (2008) states concerning the quality of the research that there can be mistakes in the research, however the researcher endeavours to draw correct conclusions. "You cannot make an omelette without breaking a few eggs" (Verhoeven and Van Baal, 2008: 156).

Call for Student Support in a MSc Thesis Research

Do you have 45 minutes to spare to support a research project *"Visitor Interests towards Bird Habitats"*?

Are you a Dutch student in Wageningen?

Do you live in one of the Idealis buildings in Wageningen like Asserpark, Dijkgraaf, Droevendaal, Haarweg, Hoevenstein, Marijkeweg, Etc. which are provided by Idealis housing organization?

Do you have 45 minutes to spend before 23 May, 2012?

If this is yes, you are among the possible respondents for my research!

Visitor Interests towards Bird Habitats seen as Landscapes

-Photo Based Quantitative Research-

If you would like to participate in this research, please contact me an email to *adrienn.aranyosi@wur.nl* or sms your name and telephone number on 0616598309 in order to make an appointment for the interview of 45 minutes.

Looking forward to your response.

Met vriendelijke groet, en dank je wel!

Adrienn Aranyosi

Appendix 6: Facebook Event and the Leeuwenborch "Lab"

URGENT CALL FOR STUDENTS: Photo Based Research about Bird Habitats

Friends Event · By Adrienn Aranyosi

May 10 at 8:00am until June 2 at 7:00pm

For my thesis research I am looking for:

-Dutch students
-who live in one of the IDEALIS buildings.

TOPIC: A photo based research about visitor interests towards bird habitats seen as landscapes.

Please contact me for appointments:
Monday through Friday: 08.00 - 19.00
Saturday: 10.00 - 17.00

Latest possible day for participation: 02.06.2012

Please feel free to invite more people who fit this profile to the "event", so that I can finish the research soon :) Thank you sooooo much :)

Grotjes, Adrienn.

Wageningen University Leeuwenborgh
Wageningen, Netherlands
View Map · Get Directions

Photo 14: Facebook Event Made by Werner, B.
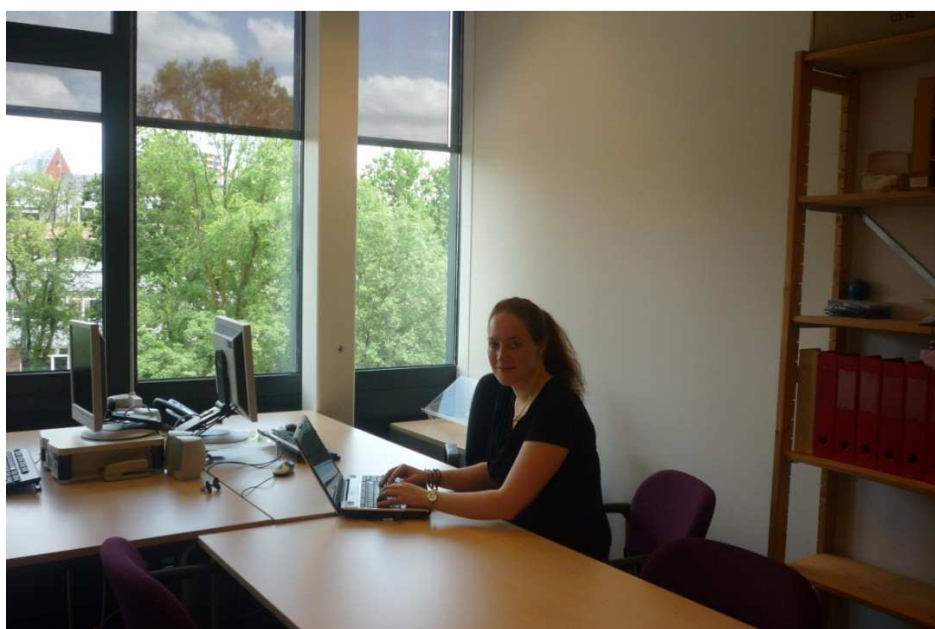
Photo 15: The "Leeuwenborch Lab" with Werner, B. (She is Not among the Test Subjects)
Illustration of the Questionnaire Based Interview – Photo Made by the Data Collector

Appendix 7: List of Test subjects and their Characteristics

Students nr	Gender	Educational Institute	Study Programme	Level of Education	Duration of questionnaire based interview (minutes)	Idealis building (test subject live at ...)	Datum of data gathering	Recorded with voice recorder	Interest in future research	Interest in result
ST1	female	WU	Animal Science	MSc	60	Asserpark	24 april 2012	no	yes	yes
ST2	male	Stoas Hogeschool	Animal Care	BSc	50	Asserpark	25 april 2012	no	yes	yes
ST3	male	WU	International Development Studies	BSc	67	Hoevenstein	25 april 2012	no	no	yes
ST4	male	WUR	Biology	BSc	60	Hoevenstein	25 april 2012	no	yes	no
ST5	male	EPS, PhD Education School - Experimental Plant Sciences	EPS	MSc (soon PhD, within 2 months)	34	Nobelweg	26 april 2012	yes	yes	yes
ST6	male	Wageningen University	Geo-Information Science	MSc	60	Marijkeweg	26 april 2012	no	yes	yes
ST7	male	Wageningen University	Geo-Information Science	MSc	76	Asserpark	26 april 2012	no	no	yes
ST8	male	Wageningen University	BSc Molecular Life Sciences	VWO Secondary School, Gymnasium	71	Asserpark	26 april 2012	no	yes	yes
ST9	female	Wageningen University	BSc International Development	VWO (completed), BSc	69	Nobelweg	26 april 2012	no		yes
ST10	male	Wageningen University	Landscape Architecture	BSc	62	Hoevenstein	27 april 2012	no		
ST11	male	Wageningen University	Environmental Sciences	BSc, 1st BSc in Chemistry	60	Hoevenstein	27 april 2012	no	yes	yes
ST12	female	Wur	MSc Organic Agriculture	BSc	53	Droevendaal	1 mei 2012	no	no	yes
ST13	female	Wageningen University	Environmental Sciences, MSc	BSc	57	Droevendaal	1 mei 2012	no	yes	yes
ST14	male	Wageningen University	MSc Biology	Scientific, BSc	67	Droevendaal	1 mei 2012	yes	yes	yes
ST15	female	WUR	Biology Bsc	VWO	51	Droevendaal	2 mei 2012	yes	yes	yes
ST16	female	Wageningen University	BSc International Development Studies	Vwo	49	Hoevenstein	2 mei 2012	yes	no	yes
ST17	male	WUR	Master MLE	BSc	45	Vijzelstraat	3 mei 2012	yes	yes	yes
ST18	female	Wageningen University	MSc Nutrition and Health	BSc	52	Droevendaal	3 mei 2012	yes	no	yes
ST19	female	Wageningen University	BSc International	Highschool - VWO	51	Droevendaal	7 mei 2012	yes	no	yes

			Development Studies							
ST20	male	WUR	BSc International Developlement Studies	VWO	55	Hoevenstein	7 mei 2012	yes	yes	yes
ST21	female	Wageningen University	MSc MLE Leisure, Tourism and Environment	HBO, BSc Business Adminsitration in Tourism Management	57	Vijzelstraat	7 mei 2012	yes	yes	yes
ST22	female	Wageningen University	MSc Nutrition and Health	HBO	40	Droevendaal	8 mei 2012	yes	no	no
ST23	male	WUR	BSc Biology	Secondary School, VWO = Atheneun	58	Droevendaal	8 mei 2012	yes	no	yes
ST24	male	Wageningen University	BSc International Development	Gymasium VWO	56	Droevendaal	9 mei 2012	yes	no	yes
ST25	female	Wageningen University	MSc MID International Development	BSc	49	Marijkeweg	10 mei 2012	yes	yes	yes
ST26	male	Wageningen University	MSc of Plant Science	BSc, pre-university college - VWO	60	Dijkgraaf	15 mei 2012	yes	yes	yes
ST27	male	Wageningen University	MSc Plant Science - specialization: Green House Horticulture	BSc_Plant Science - major: Horticulture, Economics and Innovation, VWO	55	Dijkgraaf	16 mei 2012	yes	no	yes
ST28	male	Wageningen University	Bsc International Development studies (2nd year)	VWO High School athaneun	52	Dijkgraaf	16 mei 2012	yes	yes	yes
ST29	male	Wageningen University	PhD Cell Biology	MSc Plant Biology, BSc Plant Biology, VWO - secondory school - atheneum	51	Droevendaal	19 mei 2012	yes	yes	yes
ST30	male	Wageningen University	BSc International Land and Water Management	High School - VWO - atheneum (without latin or greek)	62	Asserpark	23 mei 2012	yes	yes	yes
Total (without spoiled data)	19 male	29 WUR		2 PhD					18 yes	27 yes
Total (without spoiled data)	11 female	1 Stoas Hogeschool		13 MSc					10 no	2 no
				15 BSc					2 missing data	1 missing data

Appendix 8: ANOVA-Tables

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average (Arith. Mean)	Variance		
General Interest	30	20	67%	0.229885		
Relaxation seeking interest	30	27	90%	0.093103		
Recreation seeking interest	30	26	87%	0.11954		
Amazement seeking interest	30	15	50%	0.258621		
Learning seeking interest	30	17	57%	0.254023		
Scientific interest	30	12	40%	0.248276		
Creativity interest	30	8	27%	0.202299		
Economic interest	30	19	63%	0.24023		
Other interest	30	16	53%	0.257471		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	9.985185	8	1.248148148	5.90157	5.98E-07	1.973975
Within Groups	55.2	261	0.211494253			
Total	65.18519	269				

ANOVA-Table 1: Visitor Interests' Direction towards Black Woodpecker Landscape

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average (Arith. Mean)	Variance		
General Interest	30	22	73%	0.202299		
Relaxation seeking interest	30	25	83%	0.143678		
Recreation seeking interest	30	26	87%	0.11954		
Amazement seeking interest	30	15	50%	0.258621		
Learning seeking interest	30	17	57%	0.254023		
Scientific interest	30	14	47%	0.257471		
Creativity interest	30	5	17%	0.143678		
Economic interest	30	18	60%	0.248276		
Other interest	30	16	53%	0.257471		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	10.87407	8	1.359259259	6.489634	1.04E-07	1.973975
Within Groups	54.66667	261	0.20945083			
Total	65.54074	269				

ANOVA-Table 2: Visitor Interests' Direction towards Honey Buzzard Landscape

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average (Arith. Mean)	Variance		
General Interest	30	18	60%	0.248276		
Relaxation seeking interest	30	26	87%	0.11954		
Recreation seeking interest	30	29	97%	0.033333		
Amazement seeking interest	30	17	57%	0.254023		
Learning seeking interest	30	22	73%	0.202299		
Scientific interest	30	16	53%	0.257471		
Creativity interest	30	9	30%	0.217241		
Economic interest	30	18	60%	0.248276		
Other interest	30	19	63%	0.24023		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	9.066667	8	1.133333333	5.602273	1.46E-06	1.973975
Within Groups	52.8	261	0.202298851			
Total	61.86667	269				

ANOVA-Table 3: Visitor Interests' Direction towards Wryneck Landscape

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average (Arith. Mean)	Variance		
General Interest	30	21	70%	0.217241		
Relaxation seeking interest	30	27	90%	0.093103		
Recreation seeking interest	30	26	87%	0.11954		
Amazement seeking interest	30	14	47%	0.257471		
Learning seeking interest	30	18	60%	0.248276		
Scientific interest	30	12	40%	0.248276		
Creativity interest	30	11	37%	0.24023		
Economic interest	30	17	57%	0.254023		
Other interest	30	17	57%	0.254023		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8.562963	8	1.07037037	4.985723	9.16E-06	1.973975
Within Groups	56.03333	261	0.214687101			
Total	64.5963	269				

ANOVA-Table 4: Visitor Interests' Direction towards Nightjar Landscape

Anova: Single Factor					
SUMMARY					
Groups	Count	Sum	Average (Arith. Mean)	Variance	
General Interest	30	18	60%	0.248276	
Relaxation seeking interest	30	26	87%	0.11954	
Recreation seeking interest	30	24	80%	0.165517	
Amazement seeking interest	30	14	47%	0.257471	
Learning seeking interest	30	17	57%	0.254023	
Scientific interest	30	12	40%	0.248276	
Creativity interest	30	8	27%	0.202299	
Economic interest	30	17	57%	0.254023	
Other interest	30	16	53%	0.257471	
ANOVA					
Source of Variation	SS	df	MS	F	P-value
Between Groups	8.22963	8	1.028703704	4.613259	2.78E-05
Within Groups	58.2	261	0.222988506		
Total	66.42963	269			

ANOVA-Table 5: Visitor Interests' Direction towards Wood Lark Landscape

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average (Arith. Mean)	Variance		
General Interest	30	17	57%	0.254023		
Relaxation seeking interest	30	24	80%	0.165517		
Recreation seeking interest	30	25	83%	0.143678		
Amazement seeking interest	30	13	43%	0.254023		
Learning seeking interest	30	18	60%	0.248276		
Scientific interest	30	11	37%	0.24023		
Creativity interest	30	7	23%	0.185057		
Economic interest	30	18	60%	0.248276		
Other interest	30	15	50%	0.258621		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8.940741	8	1.117592593	5.034954	7.91E-06	1.973975
Within Groups	57.93333	261	0.221966794			
Total	66.87407	269				

ANOVA-Table 6: Visitor Interests' Direction towards Stonechat Landscape

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average (Arith. Mean)*	*Variance*		
General Interest	30	8	27%	0.202299		
Relaxation seeking interest	30	15	50%	0.258621		
Recreation seeking interest	30	19	63%	0.24023		
Amazement seeking interest	30	11	37%	0.24023		
Learning seeking interest	30	17	57%	0.254023		
Scientific interest	30	11	37%	0.24023		
Creativity interest	30	7	23%	0.185057		
Economic interest	30	17	57%	0.254023		
Other interest	30	10	33%	0.229885		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	4.985185	8	0.623148148	2.664801	0.007913	1.973975
Within Groups	61.03333	261	0.233844189			
Total	66.01852	269				

ANOVA-Table 7: Visitor Interests' Direction towards Wheatear Landscape

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average (Arith. Mean)*	*Variance*		
General Interest	30	10	33%	0.229885		
Relaxation seeking interest	30	19	63%	0.24023		
Recreation seeking interest	30	18	60%	0.248276		
Amazement seeking interest	30	11	37%	0.24023		
Learning seeking interest	30	18	60%	0.248276		
Scientific interest	30	12	40%	0.248276		
Creativity interest	30	6	20%	0.165517		
Economic interest	30	17	57%	0.254023		
Other interest	30	15	50%	0.258621		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	5.333333	8	0.666666667	2.8125	0.005244	1.973975
Within Groups	61.86667	261	0.237037037			
Total	67.2	269				

ANOVA-Table 8: Visitor Interests' Direction towards Tawny Pipit Landscape

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average (Arith. Mean)	Variance		
General Interest	30	16	53%	0.257471		
Relaxation seeking interest	30	23	77%	0.185057		
Recreation seeking interest	30	24	80%	0.165517		
Amazement seeking interest	30	13	43%	0.254023		
Learning seeking interest	30	20	67%	0.229885		
Scientific interest	30	11	37%	0.24023		
Creativity interest	30	7	23%	0.185057		
Economic interest	30	15	50%	0.258621		
Other interest	30	15	50%	0.258621		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8.2	8	1.025	4.534322	3.51E-05	1.973975
Within Groups	59	261	0.22605364			
Total	67.2	269				

ANOVA-Table 9: Visitor Interests' Direction towards Red-backed Shrike Landscape

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average (Arith. Mean)	Variance		
General Interest	30	25	83%	0.143678		
Relaxation seeking interest	30	27	90%	0.093103		
Recreation seeking interest	30	24	80%	0.165517		
Amazement seeking interest	30	16	53%	0.257471		
Learning seeking interest	30	18	60%	0.248276		
Scientific interest	30	13	43%	0.254023		
Creativity interest	30	10	33%	0.229885		
Economic interest	30	15	50%	0.258621		
Other interest	30	16	53%	0.257471		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	9.051852	8	1.131481481	5.337048	3.22E-06	1.973975
Within Groups	55.33333	261	0.212005109			
Total	64.38519	269				

ANOVA-Table 10: Visitor Interests' Direction towards Kingfisher Landscape

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average (Arith. Mean)	Variance		
Black woodpecker landscape	30	20	67%	0.229885		
Honey Buzzard landscape	30	22	73%	0.202299		
Wryneck landscape	30	18	60%	0.248276		
Nightjar landscape	30	21	70%	0.217241		
Wood Lark landscape	30	18	60%	0.248276		
Stonechat landscape	30	17	57%	0.254023		
Wheatear landscape	30	8	27%	0.202299		
Tawny Pipit landscape	30	10	33%	0.229885		
Red-backed Shirke landscape	30	16	53%	0.257471		
Kingfisher landscape	30	25	83%	0.143678		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8.15	9	0.905555556	4.054726	6.50945E-05	1.912236
Within Groups	64.76667	290	0.223333333			
Total	72.91667	299				

ANOVA-Table 11: General Interest's Pulling Power towards Bird Habitats seen as Virtual Landscapes

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average (Arith. Mean)	Variance		
Black woodpecker landscape	30	27	90%	0.093103		
Honey Buzzard landscape	30	25	83%	0.143678		
Wryneck landscape	30	26	87%	0.11954		
Nightjar landscape	30	27	90%	0.093103		
Wood Lark landscape	30	26	87%	0.11954		
Stonechat landscape	30	24	80%	0.165517		
Wheater landscape	30	15	50%	0.258621		
Tawny Pipit landscape	30	19	63%	0.24023		
Red-backed Shirke landscape	30	23	77%	0.185057		
Kingfisher landscape	30	27	90%	0.093103		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	4.763333	9	0.529259259	3.501563	0.000394	1.912236
Within Groups	43.83333	290	0.151149425			
Total	48.59667	299				

ANOVA-Table 12: Relaxation Seeking Interest's Pulling Power towards Bird Habitats seen as Virtual Landscapes

Anova: Single Factor							
SUMMARY							
Groups	*Count*	*Sum*	*Average (Arith. Mean)*	*Variance*			
Black woodpecker landscape	30	26	87%	0.11954			
Honey Buzzard landscape	30	26	87%	0.11954			
Wryneck landscape	30	29	97%	0.033333			
Nightjar landscape	30	26	87%	0.11954			
Wood Lark landscape	30	24	80%	0.165517			
Stonechat landscape	30	25	83%	0.143678			
Wheater landscape	30	19	63%	0.24023			
Tawny Pipit landscape	30	18	60%	0.248276			
Red-backed Shirke landscape	30	24	80%	0.165517			
Kingfisher landscape	30	24	80%	0.165517			
ANOVA							
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*	
Between Groups	3.296667	9	0.366296296	2.408751	0.011972	1.912236	
Within Groups	44.1	290	0.152068966				
Total	47.39667	299					

ANOVA–Table 13: Recreation Seeking Interest's Pulling Power towards Bird Habitats seen as Virtual Landscapes

Anova: Single Factor							
SUMMARY							
Groups	*Count*	*Sum*	*Average (Arith. Mean)*	*Variance*			
Black woodpecker landscape	30	15	50%	0.258621			
Honey Buzzard landscape	30	15	50%	0.258621			
Wryneck landscape	30	17	57%	0.254023			
Nightjar landscape	30	14	47%	0.257471			
Wood Lark landscape	30	14	47%	0.257471			
Stonechat landscape	30	13	43%	0.254023			
Wheater landscape	30	11	37%	0.24023			
Tawny Pipit landscape	30	11	37%	0.24023			
Red-backed Shirke landscape	30	13	43%	0.254023			
Kingfisher landscape	30	16	53%	0.257471			
ANOVA							
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*	
Between Groups	1.163333	9	0.129259259	0.510466	0.86666	1.912236	
Within Groups	73.43333	290	0.253218391				
Total	74.59667	299					

ANOVA–Table 14: Amazement Seeking Interest's Pulling Power towards Bird Habitats seen as Virtual Landscapes

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average (Arith. Mean)*	*Variance*		
Black woodpecker landscape	30	17	57%	0.254023		
Honey Buzzard landscape	30	17	57%	0.254023		
Wryneck landscape	30	22	73%	0.202299		
Nightjar landscape	30	18	60%	0.248276		
Wood Lark landscape	30	17	57%	0.254023		
Stonechat landscape	30	18	60%	0.248276		
Wheater landscape	30	17	57%	0.254023		
Tawny Pipit landscape	30	18	60%	0.248276		
Red-backed Shirke landscape	30	20	67%	0.229885		
Kingfisher landscape	30	18	60%	0.248276		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.786667	9	0.087407407	0.358025	0.953878	1.912236
Within Groups	70.8	290	0.244137931			
Total	71.58667	299				

ANOVA-Table 15: Learning Seeking Interest's Pulling Power towards Bird Habitats seen as Virtual Landscapes

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average (Arith. Mean)*	*Variance*		
Black woodpecker landscape	30	12	40%	0.248276		
Honey Buzzard landscape	30	14	47%	0.257471		
Wryneck landscape	30	16	53%	0.257471		
Nightjar landscape	30	12	40%	0.248276		
Wood Lark landscape	30	12	40%	0.248276		
Stonechat landscape	30	11	37%	0.24023		
Wheater landscape	30	11	37%	0.24023		
Tawny Pipit landscape	30	12	40%	0.248276		
Red-backed Shirke landscape	30	11	37%	0.24023		
Kingfisher landscape	30	13	43%	0.254023		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.746667	9	0.082962963	0.334156	0.963179	1.912236
Within Groups	72	290	0.248275862			
Total	72.74667	299				

ANOVA-Table 16: Scientific Interest's Pulling Power towards Bird Habitats seen as Virtual Landscapes

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average (Arith. Mean)*	*Variance*		
Black woodpecker landscape	30	8	27%	0.202299		
Honey Buzzard landscape	30	5	17%	0.143678		
Wryneck landscape	30	9	30%	0.217241		
Nightjar landscape	30	11	37%	0.24023		
Wood Lark landscape	30	8	27%	0.202299		
Stonechat landscape	30	7	23%	0.185057		
Wheater landscape	30	7	23%	0.185057		
Tawny Pipit landscape	30	6	20%	0.165517		
Red-backed Shirke landscape	30	7	23%	0.185057		
Kingfisher landscape	30	10	33%	0.229885		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.986667	9	0.10962963	0.560386	0.82903	1.912236
Within Groups	56.73333	290	0.195632184			
Total	57.72	299				

ANOVA-Table 17: Creativity Interest's Pulling Power towards Bird Habitats seen as Virtual Landscapes

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average (Arith. Mean)*	*Variance*		
Black woodpecker landscape	30	19	63%	0.24023		
Honey Buzzard landscape	30	18	60%	0.248276		
Wryneck landscape	30	18	60%	0.248276		
Nightjar landscape	30	17	57%	0.254023		
Wood Lark landscape	30	17	57%	0.254023		
Stonechat landscape	30	18	60%	0.248276		
Wheater landscape	30	17	57%	0.254023		
Tawny Pipit landscape	30	17	57%	0.254023		
Red-backed Shirke landscape	30	15	50%	0.258621		
Kingfisher landscape	30	15	50%	0.258621		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.496667	9	0.055185185	0.219129	0.991639	1.912236
Within Groups	73.03333	290	0.25183908			
Total	73.53	299				

ANOVA-Table 18: Economic Interest's Pulling Power towards Bird Habitats seen as Virtual Landscapes

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average (Arith. Mean)*	*Variance*		
Black woodpecker landscape	30	16	53%	0.257471		
Honey Buzzard landscape	30	16	53%	0.257471		
Wryneck landscape	30	19	63%	0.24023		
Nightjar landscape	30	17	57%	0.254023		
Wood Lark landscape	30	16	53%	0.257471		
Stonechat landscape	30	15	50%	0.258621		
Wheater landscape	30	10	33%	0.229885		
Tawny Pipit landscape	30	15	50%	0.258621		
Red-backed Shirke landscape	30	15	50%	0.258621		
Kingfisher landscape	30	16	53%	0.257471		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1.55	9	0.172222222	0.680751	0.726258	1.912236
Within Groups	73.36667	290	0.252988506			
Total	74.91667	299				

ANOVA-Table 19: Other Interest's Pulling Power towards Bird Habitats seen as Virtual Landscapes
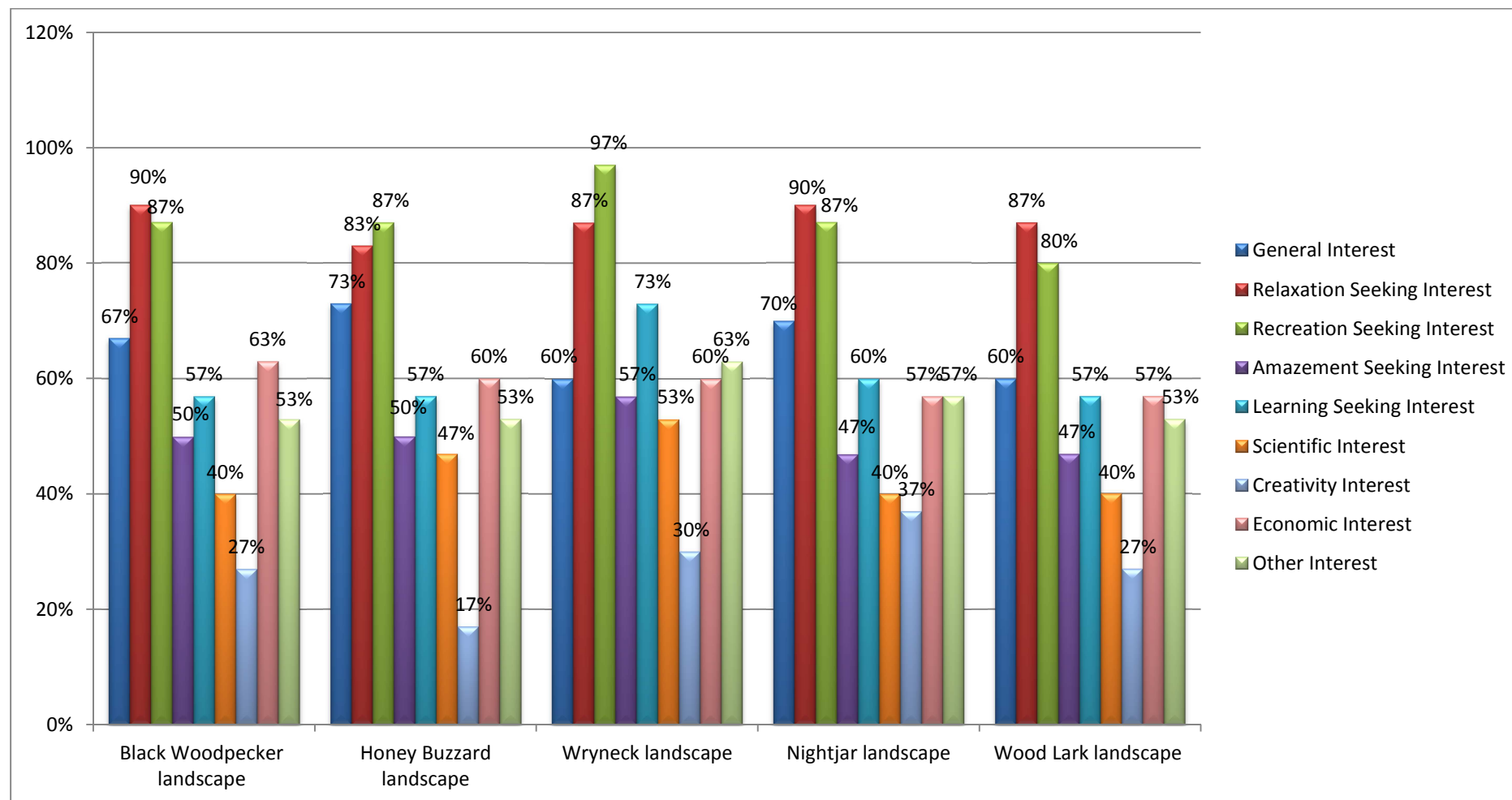
Appendix 10: Ranking of Visitor Interests' Direction towards Bird Habitats Seen as Landscapes (II.)

Legend:
- General Interest
- Relaxation Seeking Interest
- Recreation Seeking Interest
- Amazement Seeking Interest
- Learning Seeking Interest
- Scientific Interest
- Creativity Interest
- Economic Interest
- Other Interest

Categories: Stonechat landscape, Wheatear landscape, Tawny Pipit landscape, Red-backed Shrike landscape, Kingfisher landscape