

Face of place:

Developing a method of embodying personal impressions about place in an image of the human face building on theories of humanistic geography, anthropomorphism, and physiognomy

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## Abstract

Humans are inclined to anthropomorphise environments due to the natural desire to understand the world in terms of the human form and nature. The research begins from the question “How would the face of a place look like, if the place was a person?” and proceeds by developing an original method of embodying personal impressions of a physical location in an image of the human face. The theories of humanistic geography, anthropomorphism, and physiognomy provide the hypothetical outline of the method, whilst the heuristic methodological approach affords the framework for the first testing of the method in practice. In order to complete the development of the method, it is tested it through the researcher’s personal experience. Data about ‘sense of place’, as defined within humanistic geography, is collected at the sampled location Piha, and subsequently analysed using the anthropomorphic and physiognomic frameworks, resulting in an output of facial features that are assigned to the place. Thought, the subject for discussion and further research, the result of the first trial shows that the face created with the method indeed may cause feelings similar to one’s own personal impressions of a place.

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## Attestation of Authorship

“I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.”

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## Chapter 1: Introduction

The research began by asking myself how a place would look like if it was portrayed as a person. This thought came to me when observing different places, which appear to have distinctive characters, as different as human ones. Having a personal propensity to visualize ideas, and academic background in visual communication and fine arts, I questioned myself: how can this character be captured visually?

To answer this question, I explored physiognomy and anthropomorphism. Physiognomy asserts the connection between features of human character and appearance, and especially facial appearance. Anthropomorphism is the interpretation of qualities of non-human entities in terms of human character. The idea to express the character of a place in an image of the human face became the beginning point of this study. Relying on my intuition, I assumed that the theories of anthropomorphism and physiognomy may aid to frame the process of creating an image of face that may reflect one's perception of a place, a visualisation that is referred to as 'face of place' within this research.

The objective of this research is to attempt to create a method for generating an image of a human face based on one's personal impressions about a place. This will be achieved by proposing a method, then using this method to create a human face, followed by discussing the process and outcome, and then finalizing the method. The methodology proposed to synthesise this method is heuristic inquiry, as it allows for obtaining new knowledge by investigating human experiences (Moustakas, 1990).

This research could be considered to be interdisciplinary as it is built on several disciplines including humanistic geography, physiognomy, psychology of face perception, and anthropomorphism. Primarily it belongs to the field of visual communication as the proposed method of presenting one's sense of a place, as a human face is a form of visualisation.

### 1.1 Significance of the Research

Humans have a natural tendency to anthropomorphise environments (Boyer, 1996). We do so because we find it easier to understand the world in terms of our own nature: the human psychology and human form (Boyer, 1996; Waytz, Epley, & Cacioppo, 2010; Guthrie & Stefon, 2008; Barker & Miller, 1990). In this regard, the human face receives special attention, as is accepted to be the most significant carrier of information about the owner. For instance, the human face plays an important social role as we use it to retrieve socially important information about the carrier (Garland-Thomson, 2006; Eysenck, 2006). Moreover, the notion 'face' reaches beyond the mere identification of being a part of the human body and has become a metaphor that also aids understanding each other and expressing ourselves. For example, a familiar phrase 'poker face' describes the overall state of mind rather than a mere face. The meaningfulness of a face as the effective carrier of information is also recognised beyond the humanities. Chernoff (1973) suggested a way of presenting multivariate quantitative data with cartoon-like images of human faces by encoding each dimension in particular facial traits and scaling them according to the associated value. He assumed that the representation of data in the form of a face is advantageous, since people can easily recall faces and distinguish the smallest differences between them.



Given the natural human inclination and exceptional ability to understand the world in terms of human nature, and the special role faces play in the process, I synthesise the knowledge of humanistic geography, anthropomorphism, and physiognomy to propose a novel method of depicting places of human environments in the form of the human face. The proposition of the method will possibly allow us to move a step further in our natural inclination to anthropomorphise environments and would possibly allow us to construct visual depictions of anthropomorphised environments. These visual depictions might be used for a number of searches that include human-environment interactions, for example investigation of attitudes to a particular place. To add, I suggest that the approach has the potential to help us to see our environments in a novel way and, perhaps, better understand our world given human's preference to see the world in human terms.

## 1.2 The Research Outline

The research begins by reviewing theories and ideas that will allow for embodying personal perceptions of a place in an image of the human face. These later become the basis for the proposed method that seeks to answer the research question. The notion of place, theories of anthropomorphism, physiognomy, and intuition, the enabling power of this research, were reviewed.

Once the terms and processes of the method are identified in theory, I outline the initial framework for the method in the chapters 'Methodology' and 'Research Design'. In the 'Methodology' chapter, I provide the rationale for framing this research with heuristic methodology. I describe features of heuristic research and provide examples from the process of this research in order to demonstrate the suitability of heuristic research. The chapter

‘Research Design’ summaries the process of the research, structured according to Moustakas’s (1990) heuristic methodology. The chapter provides descriptions and implementation of qualitative methods used to sample, collect, and analyse the data. Purposeful sampling strategy assists in the identification of a physical location as the data sample. The requirement of heuristic research to work with intensity sample defined the choice of the location: Piha beach in Auckland Region, New Zealand. The data, identified as a personal ‘sense of place’, was collected using methods of personal discovery and gathered with notes, sketches and photographs. The collected data is analysed in two stages in order to transform the ‘sense of place’ data into facial traits. During the first stage, the data is analysed using heuristic steps of analysis, in order to obtain the major characteristics of the place and interpret those as personality traits. During the second stage, the personality traits are compared and matched with those described in physiognomy to identify facial traits.

In the chapters ‘Process of Data Collection and Data’ and ‘Data Analysis’, I describe the actual research process undertaken according to the guidelines described in the chapter ‘Research Design’. In the following chapter ‘Creative Synthesis’ I demonstrate how the acquired facial traits are synthesised in an image of a human face. Then, I discuss the method created, produced ‘face of place’, and evaluate it by comparing my perception of the actual place to the created image. After, I evaluate the methodological steps undertaken in order to explore the proposed approach. The closing chapter outlines the research findings, suggests further implications of the results, and outlines directions for further research.

## Chapter 2: Literature Review

The review considers topics with regard to the question: “How personal impressions about place can be embodied in an image of the human face using anthropomorphism and physiognomy?” The review aims to ground the initial research question in theory, define its terms, and provide the theoretical framework for the research process.

First, the notion ‘place’ is discussed in order to define it within the context of this study. The following section 2.2 Sense of Place, Expressed discusses how a place may be depicted in accordance to impressions about it. This includes questioning how artists express their vision of physical locations. Following in section 2.3 Anthropomorphism, theories about anthropomorphism, the human propensity to assign non-human entities with human-like features, are reviewed. Also I review the practice of anthropomorphic depiction of places and the theories about regularities in the process of anthropomorphises. The section 2.4 Faces are Special reviews the significance of faces for the humans as both visual stimuli and as a media for expressing ideas. This is followed by a review of publications about physiognomy, a theory that assumes that one’s personality traits can be understood by assessing one’s face and facial traits. The historical and theoretical background, as well as a framework for the practical application of physiognomy, is reviewed. The concluding section 2.6 Intuition outlines the role of intuition in the process of obtaining new knowledge and creating new concepts.

## 2.1 Place

Place is a broad concept, which can be used to denote various ideas including one’s social place and spatial position (Tuan, 1979). In the sense of spatial position, or location, place is the centre of geographical interest (Cresswell, 2009). However, even narrowed down to the

geographical terms, the question ‘what is place?’ allows space for diverse answers. This is due to the variety in geographical approaches, each of which defines place according to its stance (Henderson, 2009). For example, branches of physical geography explain place as a part of the earth’s surface that can be defined by the description of its air, soil, water systems, landforms, climate, plants, and animals (Castree, Kitchin, & Rogers, 2013; Henderson, 2009). At the same time, economic geography describes place as a location that may be characterised through its economic processes and characteristics (Henderson, 2009).

In this research, I seek to understand the character of place through the human experience, therefore the term ‘place’ is considered from the position of humanistic geography, a sub-field of human geography (Cresswell, 2009). Human geography concentrates on the relationship between people and place in the meaning of physical geography. As a result of these relationships, place becomes not the mere physical space, but the physical space as the circumstance and partially result of the human activity (Castree et al., 2013; Gregory, 2009). Thought connected to the human activity, in human geography, place is still a physical space. However, in addition to the natural features it includes everything that encompasses the place’s overall look, including human made objects: buildings, parks, roads, signs, etc. (Cresswell, 2009). In turn, humanistic geography seeks to understand place through human reactions to the place and all its components (Sharp, 2009; Tuan, 1976). The premise of humanistic geography is that the world is the body of subjective human experiences resulting from encounters with surroundings, and that the meanings of experiences can be accessed only through the human mind (Cloke, Philo, & Sadler as cited in Sharp, 2009; Sharp, 2009). The relationship between people and place is one of the prominent questions in humanistic geography (Castree et al., 2013).

Place, as understood by humanistic geography, is “a center of meaning constructed by experience” (Tuan, 1975, p. 152). This definition is suggested by geographer and philosopher Yi-Fu Tuan (1975, 1979), who extensively explored the field of humanistic geography, and which was adopted in the field after him (e.g. Karjalainen, 1999). In other words, from the stance of humanistic geography, a point in space becomes a place, when people ascribe it with meanings identified through their experience. This experience includes emotions and feelings evoked by the place, its physical space and everything that is present at the place (Cresswell, 2009). By developing emotional attachment to the place, one grows sense of that particular place (Tuan, 1979; Cresswell, 2009). Sense of place is a prominent notion of humanistic geography in describing a place, because sense of place reflects the place itself in one’s experience (Tuan, 1975, 1979). Although an abstract idea (Barker, 1979) which is hard to define precisely (Relph, 2000), sense of place has an important role in research. An *Ad Hoc* Committee of American geographers (as cited in Tuan, 1979) notes this importance, stating “the modern science of geography derives its substance from man’s sense of place” (p. 387).

Sense of place is individual for every person and developed through extended personal contact with the place. One’s sense of place is formulated through one’s perceptions: sight, hearing, smell, taste, touch, the synthesis of these, and one’s reaction to these (Tuan, 1979; Relph, 2001). Meanwhile, not only personal presence allows one to form the sense of a particular place. Sense of the place can be also formulated through studying of how the place is depicted in art, including painting and literature (Tuan, 1975; Ley, 1985; Entrikin, 1994; Wright, 1947). In fact, Tuan (1975) stresses that feelings provoked by a place, must be given shape and visualized, so that the generated depiction allows others to learn more about the particular place. Tuan (1975) asserts that the task of visualising the sense of place belongs to

artists, because, in contrast with other people, “they can objectify intimate feelings in paintings, a sculpture, or in words” (p. 152). Entrikin (1994) notes that geographers are interested in artists’ senses of place, because the sense of place expressed in the work of art may add value to the place in people’s view and consequently enhance public’s attitudes to it. Stimulating and developing human attitudes to place and people’s sense of place is important because people with a strong sense of place have a more positive attitude towards the environment (Kaltenborn, 1998). In turn, social anthropologist Kay Milton, in her book *Loving Nature*, devoted to the discussion of human attitudes towards the environment, states that engagement of emotions in developing relationship with environment could be the key point in the task of stimulating protective behaviour towards nature in people in our heavily industrialised world (Milton, 2002).

Having described place as a centre of meaning, humanistic geographers seem to marginalize physical characteristics of place and its borders. Although Tuan (1975) stresses that complete understanding of place is possible only by combination of emotional relation to the place and its theoretical characteristics (see also Cresswell, 2009), humanistic geographers seem to not have a unified opinion about how to locate a place and describe its physical characteristics. The clearest explanation of what a place is as a tangible territory from a humanistic perspective is suggested by Tuan (1975, 1979), however not without contradiction. In 1975 he states that human places may be of different size, from the seat by a fireplace to a city or country. He continues that a smaller place can be known through the act of direct experience and perception, and the bigger, like a city or a country, through the abstract knowledge about the place, combined with experience (Tuan, 1975). Then, in 1979, he defines place as “a small world, the node at which activities converge” (p. 411). He also specifies that the lack of direction is a necessary feature of a place. For example, the pedestrian pathway or a street

cannot be a place because the movement is defined and people move through the space without signifying the importance of the space they move through. At the same time, the square or the street corner can, because here people move more arbitrary and no direction is strictly predetermined. Only non-directed, indiscrete space can be accepted as a place (Tuan, 1979).

## 2.2 Sense of Place, Expressed

In the previous section of this chapter, 2.1 Place, I discuss the notion 'place' as understood in humanistic geography and in this research. In humanistic geography, place is understood through an individual's 'sense of place' (Tuan, 1975, 1979; Cresswell, 2009). Sense of place is a combination of feelings and reactions that are evoked by the place when an individual absorbs it through their perceptions, feelings, and experiences (Cresswell, 2009; Tuan, 1975). Tuan (1975) emphasizes that sense of place, a formless, vague and a very personal matter, must be given a tangible form, for example in form of a painting. As he further suggests, the painting, which is the manifest of an artist's sense of place, can help others to learn about the place and form their own sense of the place, too. This research explores a possibility to introduce a regular process for the visual depiction of sense of place using anthropomorphism and physiognomy. In this section, I review how artists depict their sense of place in paintings in order to obtain information for the further comparison of the artistic process with the possible regular process for visual depiction of sense of place.

Tuan (1975) states that artists are unique in their ability to express sense of place in a tangible form and that art affords the display of personal feelings about place, which are otherwise difficult to articulate.

Literature and painting induce an awareness of place by holding up mirrors to our own experience; what had been felt can now be seen, what was formless and vacillating is now framed and still (Tuan, 1975, p. 161).

In the same publication, Tuan (1975) clarifies that art, including painting, does not aim to copy reality. Art historian Gombrich (1977) examines the topic of correlation between depictions and the reality in his work *Art and Illusion: A Study in the Psychology of Pictorial Representation*. Gombrich (1977) and Arnheim (1947) agree with Tuan (1975) that art does not copy reality and further add that art does not aim to do so. In order to understand what the picture of place shows to a spectator, and what influences the change of reality when place is brought into a painting, I briefly overview the artistic process. The creative process of an artist is a complex matter that includes topics such as perception and psychology. The purpose of the following brief overview is to consider the artistic process in order to demonstrate how artists express their sense of place.

Perception and representation are two processes that may explain how artists depict their sense of place (Gombrich, 1977). The perceptual process of an artist fundamentally is not different to that of an amateur. Human perception is significant in its ability to provide accurate information of the world in order to ensure survival (Wade, 2005). The motifs of real life, represented within paintings, have at least three basic limitations in their truthfulness: transformation of reality according to the artistic subjective vision, artistic style of depiction, and limitations of the instruments, which the artist uses to depict the place. The first limitation occurs when artists form their subjective vision of reality based on perception, which initially is quite accurate. Artists form their vision according to their personality, selective preferences, feelings, attitude, and intuition (Gombrich, 1977; Arnheim, 1947).

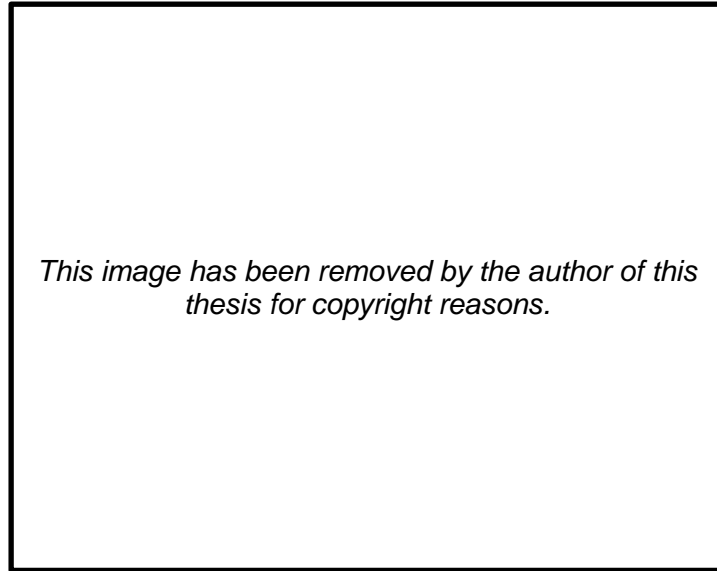


Gombrich (1977) names this subjective vision an “image in the mind” (p. 57). However, as Arnheim (1947) notes, “perceiving is not yet representing” (1947, p. 71). The second limitation is the style of an artist: an impressionist and a realist are likely to depict the same object differently, according to their vocabulary of shapes, form, colour treatment and so on (Gombrich, 1977).

The third limitation of truthfulness of the artistic depiction, compared to the reality, comes to the fore when artists choose how to render a motif on canvas in order to translate their vision into a convincing image. Artists are limited in how they may render their vision with the instruments, or medium, they use (Gombrich, 1977; Arnheim, 1947). For example, paints are capable of brush strokes or patches of colour, while pencils afford clear lines. Consequently, artists choose the aspects of motif, which their instruments are capable to accentuate (Gombrich, 1977). The result is that each particular painting, which shows the artist’s sense of place, is not a copy of physical terrain, but the depiction of the artist’s vision of the reality, created in the way his style and instruments allow him to do (Gombrich, 1977).

To reveal the difference between pictorial and photorealistic depiction of the motif, Gombrich (1977) demonstrates the painting *Mont Sainte-Victoire* by Paul Cézanne (Figure 1) and a photograph of the Mont Sainte-Victoire (Figure 2). Gombrich (1977) recommends handling such examples with care, since it is unlikely that a photograph shows the place the way it was at the moment when the artist saw it. Nevertheless, he asserts that the comparison of a painting with a photograph of the portrayed place is helpful for getting insights into the process of artistic depiction of reality. For example, in this particular case, Gombrich (1977) notes that on Cézanne’s *Mont Sainte-Victoire* (Figure 1), the steepness of the mountain slopes

is obviously exaggerated: this is how Cézanne chose to organize what he saw into a convincing depiction.

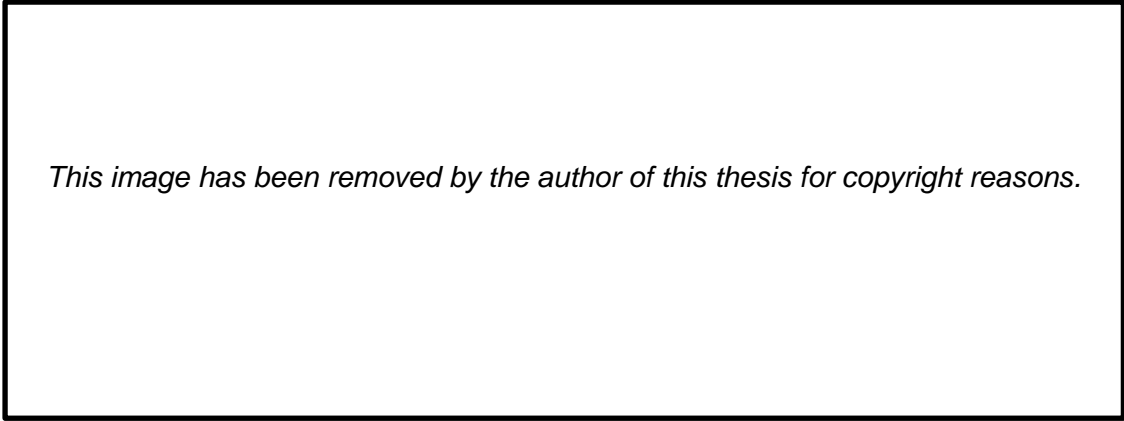


*Figure 1. "Mont Sainte-Victoire" by Paul Cézanne (Gombrich, 1977, p. 57)*

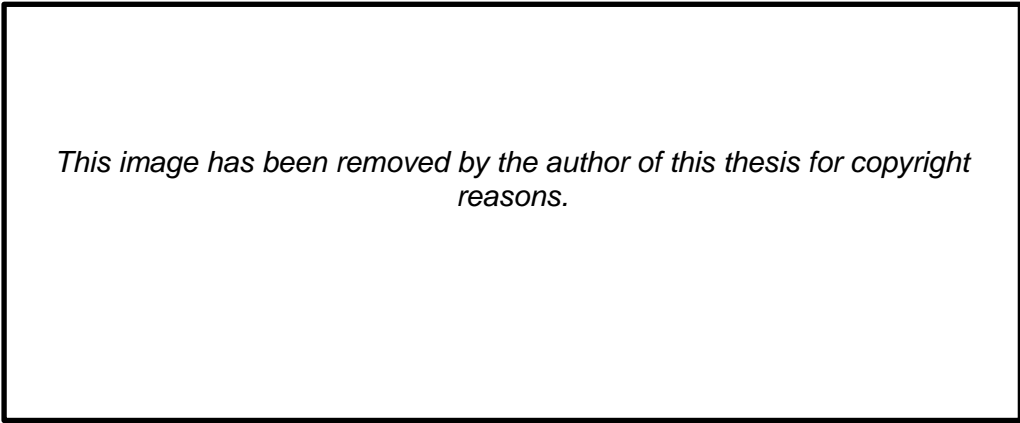


*Figure 2. A photograph of Mont Sainte-Victoire, as seen from Les Lauves, from the approximately same position, as it was seen and depicted by Cézanne in his painting "Mont Sainte-Victoire" (Rewald as cited in Gombrich, 1977, p. 57)*

Gombrich (1977) mentions that paintings of Vincent van Gogh also attract interest of art historians, who search to compare paintings with the real setting. The way in which the reality is depicted on van Gogh's paintings can be seen, when pairing paintings with photographs of the original settings (Figures 3-5). Among the reasons why the vision of Vincent van Gogh attracts attention is the colour palette of his works. Indeed, there is much evidence that van Gogh was fascinated and experimented with colour (Berezhnoy, Postma, & van den Herik, 2007). Van Gogh's paintings also exemplify how the medium that the artist used to render his perception, affected the pictorial representation of the artist's vision. As Arnheim (1947) notes, it is improbable that van Gogh perceived the image as consisting of "sinuous lines" (p. 72) or "wavy strokes" (p. 72). Rather, these are the "pictorial equivalent of his [Vincent van Gogh's] perceptual concept" (Arnheim, 1947, p. 72).



*Figure 3.* On the left: the contemporary photo of the Langlois Bridge in Arles; on the right: “The Langlois Bridge in Arles” (1888) by Vincent van Gogh (Templeton Reid, LLC, 2013a)

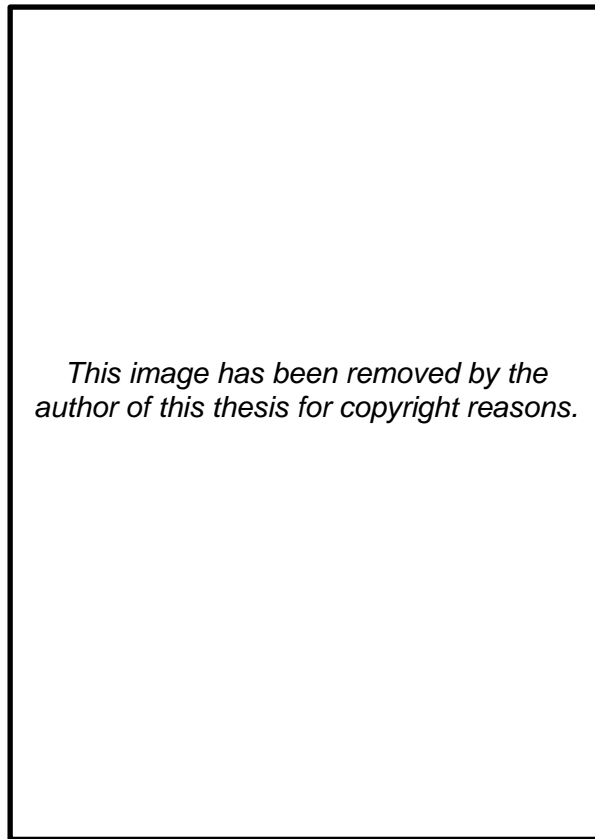


*Figure 4.* On the left: the painting “The Town Hall at Auvers” (1890) by Vincent van Gogh; on the right: contemporary photo of the Town Hall (Templeton Reid, LLC, 2013b)

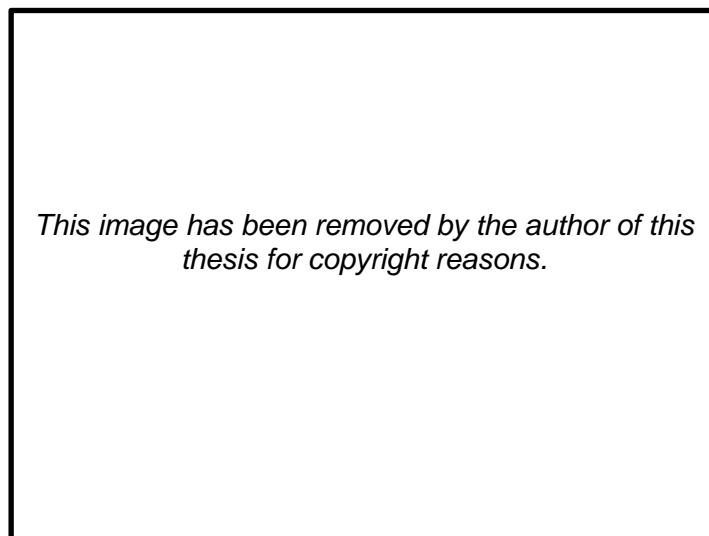
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*Figure 5.* On the left: Van Gogh's "The Café Terrace on the Place de Forum" (1888); on the right: the photo of the place where the painting took its motif (Templeton Reid, LLC, 2013a)

The landscape painting *Nichols Canyon* by David Hockney (Figure 6) is yet another example how an artist may depict an area. Tufte (2006) in his work *Beautiful Evidence* demonstrates Hockney's *Nichols Canyon* as a representational image, scaled and executed in a map-like manner, as it could be seen from above. However, as Bracker (2012) note, *Nichols Canyon* was inspired not by the look from above, but by the way Hockney saw it through the repeated daily car journeys after a year of residency in this area (also: *David Hockney: illustrated chronology*, n.d.). To illustrate this point, Figure 7 shows the overview photograph of the area, and images of the street view of the Nichols Canyon road (Figure 8) demonstrate the contemporary view of the driveway that was depicted in 1980: starting from the Hollywood Boulevard (Figure 8: first image on the right in the top row) and leading toward Mulholland Drive (Bracker, 2012).



*Figure 6.* Landscape painting “Nichols Canyon” (1980) by David Hockney (Tufte, 2006; Bracker, 2012)



*Figure 7.* Nichols Canyon Road: an overview photo of the area (Walsh, 2014)

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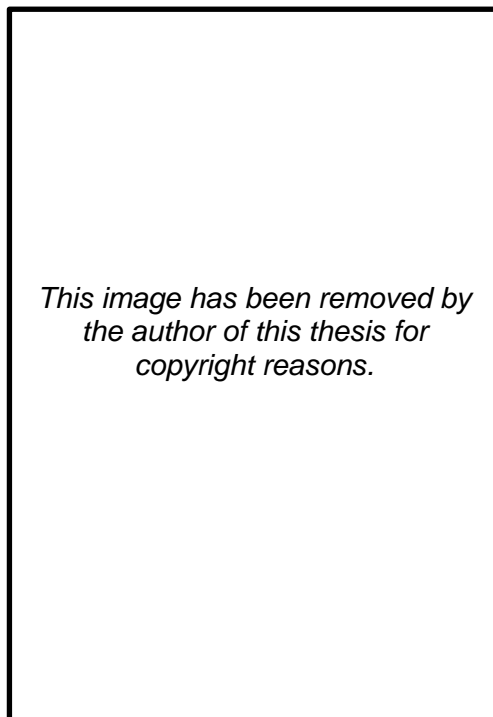
*Figure 8.* Nichols Canyon Road: pictures of the driveway starting from Hollywood Boulevard ("Google Maps", 2011), where David Hockney made his daily journeys about three decades ago and got inspiration for the painting "Nichols Canyon" (Figure 6)



The examples included in the review so far demonstrate the transformation of a place into a painting, if to assume that photographs display place as it is, at least to some extent, as suggested by Gombrich (1977). But how do different artists depict the same place? Arnheim (1947) states that, in order to depict a certain motif, the artist invents a pictorial equivalent for the pattern he aims to represent. Arnheim (1947) asserts that each artist invents a pictorial equivalent of a place in his own manner, however, despite the differences, all invented pictorial equivalents are equally valid. Confirming this, Gombrich (1977) describes the incident from the autobiography of Richter, a German illustrator, who observed that depictions of the same landscape differ not only when artists use different instruments, but also among those who used a similar medium, because the personality of the artist, his attitudes, style and medium he uses, influence the result. Two paintings of the same spot, The Eiffel Tower (Figure 9), by Robert Delaunay (Figure 10) and Georges Seurat (Figure 11) may serve as a visual example of how depiction of place, or sense of place, may differ when portrayed by different artists.



*Figure 9.* Photo of the Eiffel Tower (HarshLight, 2007)



*Figure 10.* “Eiffel Tower” (1911) by Robert Delaunay (Apollinaire & Eimert, 2012, p. 19)



*Figure 11.* “Eiffel Tower” (1889) by Georges Seurat (Cousturier, 2013, p. 221)

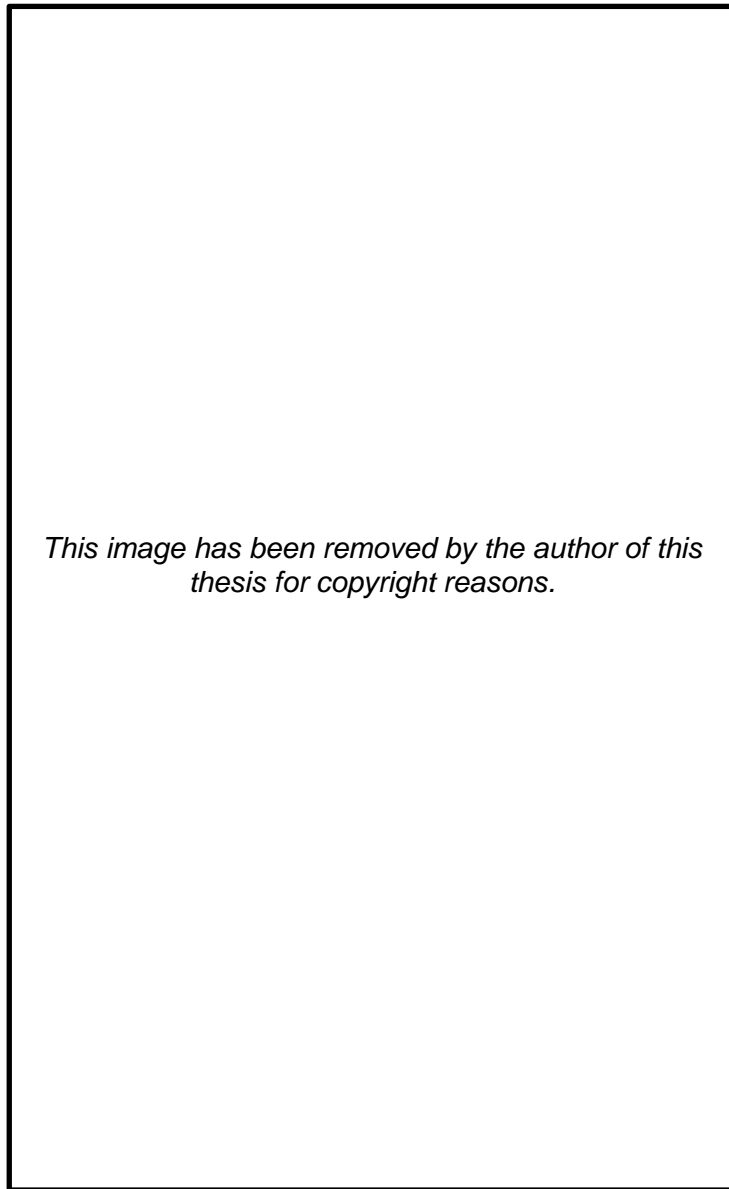
### 2.3 Anthropomorphism

The term ‘anthropomorphism’ stands for endowing nonhuman entities with human physical or moral features, including emotions, intentions, motivations, and characteristics of behaviour (Guthrie & Stefon, 2008; Chan, 2012; Blanchard, 1982; Epley, Waytz, & Cacioppo, 2007). Anthropomorphism is a complex phenomenon that includes concepts of different fields, such as cognitive psychology, social psychology, developmental psychology, and the neurosciences (Waytz, Epley, & Cacioppo, 2010). Anthropomorphism is described in a diverse range of scientific papers, including the philosophy of science, psychology, ergonomics, and marketing (Kwan & Fiske, 2008). Within the frame of this thesis, I do not review the notion of anthropomorphism in its whole complexity. Instead, I focus specifically on examples of the anthropomorphic depiction of place or physical environments. This is followed by a brief review of anthropomorphism as a feature of human perception, a description of how anthropomorphic depiction is specified in each case, and a discussion of why anthropomorphism of the environment deserves attention.

Examples of anthropomorphic depiction of physical environments can be found in different areas of life and disciplines. Forsberg (2003) states that residents tend to portray their territories in anthropomorphic ways, and that this practise is typical for human history. Particularly, he notes that territory is often perceived by residents as a female, or a female body. This analogy rises from the understanding that, as something motherly and feminine, the land should be protected from intruders. As an example, Forsberg (2003) mentions the emotionally rich concept by which Russians often refer to their country: “Mother Russia” (Medvedev, as cited in Forsberg, 2003, p. 14). In turn, Depa (2013) views anthropomorphism as a literary technic that Charles Dickens uses in his novel “The Chimes” to capture “the

hero's psychology and the spirit of the city" (p. 560). Dickens humanizes London by describing it as "goose-skinned, blue-nosed, red-eyed, stony-toed, tooth-chattering" (Dickens, as cited in Depa, 2013, p. 561) city.

Examples of anthropomorphic depiction of territory are also found in cartography. Meurer (2008) shows examples of 16<sup>th</sup> century anthropomorphic maps of Europe, where the continent is depicted as a queen (Figure 12). Here, topographical features of the continent are heavily stylised and generalised in order to symbolise the current political situation in Europe. Land masses on the map are organised to form the crowned female figure. Countries are placed according to their current political image. Germany for example, is in the area of the chest, representing the heart of Europe, or, according to the second interpretation, taking the central position as a country that is well-armed against enemies (Meurer, 2008).



*Figure 12.* The depiction of Europe as a queen by Sebastian Münster, 1588 (Meurer, 2008, p.

43)

Harvey (1868) also created anthropomorphic maps of countries. His atlas of “humourous outlines of various countries” (p. 1) presents each country as a human figure to reflect the character of the country. For example, Scotland is pictured as a traditional Scottish piper (Figure 13). Each map is provided with a verse that describes the national character in an anthropomorphic way as well. For example, the verse supplementing Scotland states:

A gallant piper, struggling through the bogs,

His wind bag broken, wearing his clay clogs:

Yet, strong of heart, a fitting emblem makes

For Scotland – land of heroes and of cakes (Harvey, 1868, p. 7).

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*Figure 13. The anthropomorphic map of Scotland (Harvey, 1868, p. 7)*



Not only cities, countries and continents can be anthropomorphised. Boyer (1996), Norenzayan, Hansen, and Cady (2008), and also Caporael and Heyes (1997) agree that anthropomorphism is widely used among people. In particular, Norenzayan et al. (2008) state that people tend to assign objects of nature, such as lakes, trees, and mountains with complex human emotions. Boyer (1996) mentions breathing mountains, talking rivers, listening statues, and “thinking trees” (p. 95). Guthrie and Stefon (2008) observe a similar tendency among scientists. For example, naturalist Charles Darwin described Nature as “constantly seeking to improve her creatures” (Guthrie & Stefon, 2008, para. 3). Finally, Caporael and Heyes (1997), as well as Boyer (1996) note that anthropomorphism of nonhuman entities can be found in almost every culture.

Anthropomorphism is not only widespread, it is also, as Caporael and Heyes (1997) and Boyer (1996) claim, a natural human predisposition. In agreement with this, Guthrie and Stefon (2008) note that the human tendency to anthropomorphise is “deep-seated and persistent” (para. 1). Waytz, Morewedge, Epley, Monteleone et al. (2010) mention that it is a “chronic tendency for people to see humanlike agents in their environment” (p. 410). They also indicate that Xenophanes, Feuerbach, Hume and Freud had a similar opinion about the significant role of anthropomorphism in the human cognition.

Despite the assurance that anthropomorphism is a “built-in” feature of the human cognition (Caporael & Heyes, 1997), the answer to the question ‘why do people anthropomorphise?’ does not seem to have an unequivocal answer. One of the opinions states that anthropomorphism is a consequence of the natural human predisposition to understand the world in familiar terms of form and action, namely in terms of human form and action (Xenophanes, as cited in Waytz et al., 2010; Blanchard, 1982; Guthrie & Stefon, 2008). As

Norenzayan et al. (2008) state: “Indeed, it seems nearly impossible [for humans] to make sense of the world without using an anthropomorphic framework” (p. 190).

Since this research aims to explore the approach of presenting place with an image of the human face and one of the procedures within this approach includes the anthropomorphic interpretation of a place’s characteristics, an anthropomorphic framework should be explained. Overall, this literature review revealed the lack of definitive knowledge on how one anthropomorphises and decides which human features belong to any given nonhuman object. Epley et al. (2007), as well as Persson, Laaksolahti, and Lönnqvist (2000) also state that anthropomorphism is not sufficiently understood, nevertheless publications of these authors contain the theoretical material, which attempts to explain the process of anthropomorphism.

Epley et al. (2007) propose that people anthropomorphise using their knowledge about self and others. When anthropomorphizing, people project their knowledge about self and others onto nonhuman entities.

When a person relies on egocentric or anthropocentric knowledge to guide reasoning about nonhuman agents—be they religious, mechanical, or animal agents—he or she is anthropomorphizing.

(Epley et al., 2007, p. 880)

In turn, Persson et al. (2000) suggest that anthropomorphism is not a single process, but a multi-layered phenomenon. On a simpler level, people may anthropomorphise a non-human object based on its appearance, or ability to move. However, people may also ascribe an object with more complex psychological characteristics. One of the levels of anthropomorphism, as described by Persson et al. (2000), is ‘Traits’. At this level of

anthropomorphism people ascribe non-human entities with human personality traits, or they outline their impressions of the non-living by assigning those with features of human character, e.g. shy, optimistic, smart, stingy, etc. People incline to ascribe non-human entities with features of the human character, because features of the human character are understandable – people operate with terms such ‘nervous’, ‘curious’ or ‘shy’ every day – and these are “handy ways of summarizing one’s impression of a person or a system” (Persson et al., 2000, p. 3). To sum up, an anthropomorphic framework on the basis of publications by Epley et al. (2007) and Persson et al. (2000) may be outlined as reasoning about nonhuman entities based on one’s knowledge of human nature and summarizing these impressions by assigning entities with familiar human personality traits.

For the sake of the balance of opinions, it should be mentioned that anthropomorphism is still a debatable notion. Kwan and Fiske (2008), summarising publications about anthropomorphism from 1893 to 2007, state that conceptual validity of anthropomorphism was argued for its duration. Chan (2012) and Guthrie and Stefon (2008) state that anthropomorphism is criticized because it possibly interferes with the understanding of the world. Hansen (as cited in Caporael & Heyes, 1997) states that, despite the fact that usually science considers features of human cognition, “elimination [of anthropomorphism] was a critical condition for the emergence of modern science” (p. 61).

In spite of criticism, anthropomorphism remains the subject of scientific interest (Caporael & Heyes, 1997; Duffy, 2003). In part, this is because anthropomorphism proved a useful tool in changing human attitudes as people tend to enhance the value of objects they anthropomorphise (Caporael & Heyes, 1997). As Tam, Lee, and Chao (2013) explain, “When an entity is anthropomorphized, it becomes deserving for moral consideration” (p. 519). This

feature attracts, in particular, environmental scientists. In particular, the research completed by Tam et al. (2013) demonstrates that, when people are assigned a task to design the poster to promote conservational behaviour, they typically draw the Earth having a human face. Chan (2012) and Tam et al. (2013) suggest that anthropomorphism, being able to improve human attitudes, may help in raising peoples' awareness about environmental problems, stimulate conservational behaviour, and therefore deserves attention.

## 2.4 Faces are Special

This section reviews the human face in order to identify human attitudes towards face and its depiction from the position of both culture and visual perception. The focus is specifically on the theories related to the invariant aspects of face, facial traits, which are the base of the face recognition process (Haxby, Hoffman, & Gobbini, 2002). Overall, I look at the role of face in the human society and culture, followed by a review of the special status of the human face for human perception.

### 2.4.1 The Social Role of the Human Face

Faces play a central role in social life. By looking at faces people recognize each other, retrieve essential information about each other such as gender or age, and evaluate each other's personality traits (Bruce & Young, 1986; Quadflieg, Todorov, Laguesse, & Rossion, 2012). Bruce & Young (1986) and Haxby et al. (2002) describe face as the key to the identity of its holder. According to Bushnell (1998), humans are exceptional in their ability to recognize specific faces. Haxby et al. (2002) specifies that humans' high level of expertise in

face recognition is determined by our basic needs of survival and monitoring of possible threats.

The question of how people recognize specific faces is a debated topic. Young, De Haan, and Bauer (2008) state that there is strong proof that people recognize faces, relying on a configuration formed by features, or holistically. Gold, Mundy, and Tjan (2012) confirm that theorists mostly prefer the theory of recognizing faces as a holistic pattern, but their own study demonstrates the meaningfulness of individual facial features, such as the shape of the nose and that “a face [as a whole] is perceived no better than the sum of its individual parts” (p. 427).

Regardless of the level of familiarity, people are generally able to obtain some information about the face holder rather accurately (Bruce & Young, 1986). For example, from the quick look at a person’s face, one is generally able to identify age and gender of a person (Young et al., 2008; Quadflieg et al., 2012), the race (Quadflieg et al., 2012), or estimate ancestry (Garland-Thomson, 2006). Garland-Thomson (2006) and Haxby et al. (2002) suggest that a face is also able to reveal more particular information about its owner such as the personal history, background, and level of health.

People usually form an impression of each other’s personality based on facial appearance (Rule & Ambady, 2010; Bruce & Young, 1986; Quadflieg et al., 2012). People tend to attribute unfamiliar faces with personality characteristics, such as honesty, intelligence, aggressiveness, competence, or dominance (Bruce & Young, 1986; Quadflieg et al., 2012). Quadflieg et al. (2012) and Rule and Ambady (2010) specify that a rapid look at a person’s face allows one to form these conclusions. Rule and Ambady (2010) mention that this

judgment may be accurate across different age, race or cultural groups. Furthermore, people tend to agree with their evaluation of someone's personality traits (Rule & Ambady, 2010; Quadflieg et al., 2012). For example, recent studies showed a link between the presence of signs of dominance in chief executive officers' faces and company profits (Quadflieg et al., 2012). The result of another study showed that research participants' subjective impressions of foreign politicians' faces matched the result of elections (Rule & Ambady, 2010).

#### 2.4.2 Face as Metaphor

Goffman (1972), in his essay *On Face-Work*, defines the term 'face' as a positive image of self, successfully claimed by a person in society. Goffman (1972) believes that during a social encounter a person would feel moral responsibility to behave in a certain manner in order to keep the 'face' he claims for himself. Some other complex social notions are expressed through the metaphors that involve the 'face' concept such as 'poker face', 'straight face', or 'iron face' (Garland-Thomson, 2006, p. 175). Social actions can also be explained through the 'face'-metaphor, for example 'slap on the face' (Garland-Thomson, 2006, p. 175).

#### 2.4.3 Face Perception

Young et al. (2008) state that face perception is a special topic of human cognition. Goldstein (1983) and Wechsler (2007) assert that the human face is a prominent visual stimulus for human perception. Haxby et al. (2002) suggest that face perception could be the most advanced skill of human visual perception. According to Wechsler (2007) and Eysenck (2006) it has been generally accepted that faces are different from other objects in human

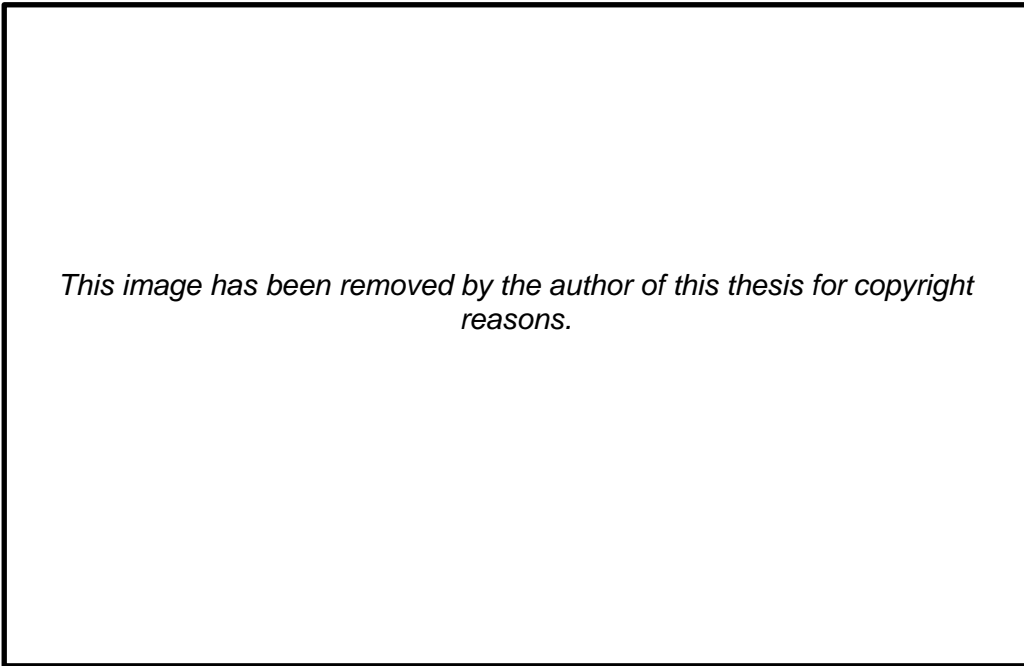
perception. Morton and Johnson (as cited in Haxby et al. 2002) showed that, soon after birth, babies prefer to look at a face rather than at any other object. Young et al. (2008) also note that faces are preferred visual stimuli for humans due to the importance of faces in social interaction (see also Wechsler, 2007; Liggett, 1974). Simion, Valenza, and Umiltà (1998) observe that it has been suggested that faces are likely processed by a separate system in the human brain. Haxby et al. (2002) observe that a face, as a visual stimulus is likely processed by a special system of the human brain, while Rule and Ambady (2010) assume that there is a special process devoted to face recognition.

The special status of a face for the human perception is also proven by the human predisposition to see faces in various patterns, unrelated to the human face (Liggett, 1974). Wechsler (2007), Liggett (1974) and Wade (2013) state that humans tend to see faces in fire, clouds, and rocks. A famous example is the picture of the surface of Mars, where geologic formations and shadows created an image resembling the human face (Figure 14). Gombrich (1977) also mentions the ability of people to see faces in any face-like object or pattern. One may detect faces in the design of wallpaper or find that the front of a car resembles a face. People distinguish faces in various patterns and objects on the basis of the basic clues to the symmetry or the orientation of the face (Wade, 2013). For example, Wechsler (2007) refers to surrealist paintings where the viewer can detect faces, even if the facial traits are shown through the forms of other objects, or shades. Salvador Dali's *Visage Paranoiaque* is an example (Figure 15).

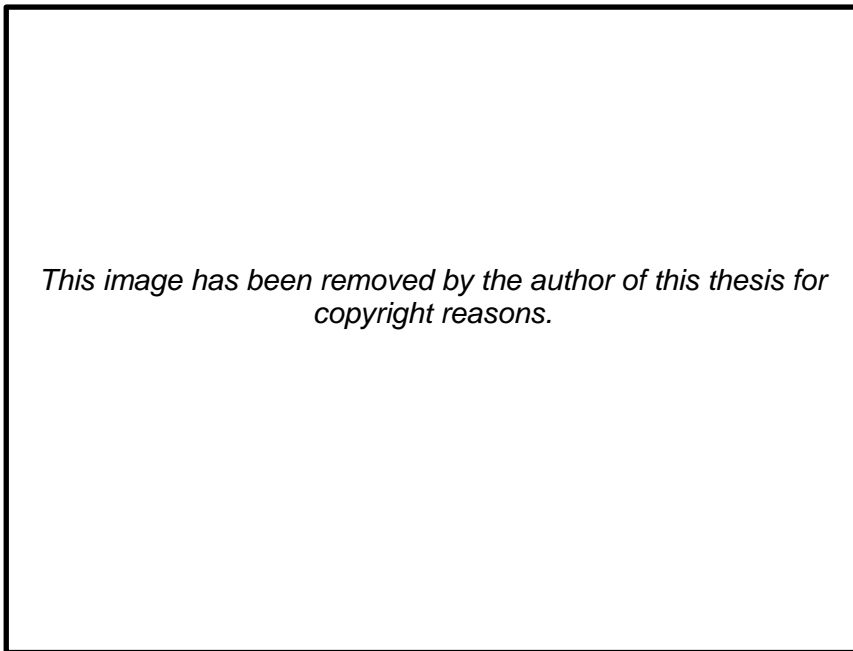
The exceptional human ability to perceive faces is recognized outside humanities. For example, Chernoff (1973) presents multivariate quantitative data with a cartoon-like image of the human face by encoding each dimension in particular facial traits and scaling them

according to the value. He assumes that the representation of data in the form of a face will make it easier to track and remember the main conclusions, since people can easily recall faces and distinguish the smallest differences between them.





*Figure 14.* The photograph of the geologic formation 'Face on Mars' (NASA & Jet Propulsion Laboratory, 1998). The 'face' is enlarged



*Figure 15.* Elements of physical space depicted on Visage Paranoiaque by Salvador Dali (as cited in Gandelman, 1979, p. ) form the pattern where the human face may be detected. The face is seen especially well if you turn the picture clockwise

## 2.5 Physiognomy

Physiognomy is a theory that assumes that personality traits of a person may be revealed through the assessment of his or her appearance, and especially the face (Rutkowska, 2010; Kamenskaya & Kukharev, 2008). The word *physiognomy* has a Greek origin and combines *physis* meaning “nature” and *gnomon* meaning “interpreter” (Colman, 2009). Johann Kaspar Lavater, the author of *Essays on Physiognomy*, frequently cited by many contemporary authors (e.g. Rutkowska, 2010; Kamenskaya & Kukharev, 2008; Reuter, 2008; Rosetree, 2001; Tickle, 2011) describes physiognomy as the

[S]cience or knowledge of the correspondence between the external and internal man, the visible superficies and the invisible contents  
(Lavater, 1869, p. 11).

Lavater (1869), Whiteside (1974, 1988), Rosetree (2001), and Tickle (2011) unanimously begin the discussion of physiognomy from the observation that people usually have different faces and different characters, and that people with similar faces tend to have similar personalities.

The focus of this review is on physiognomy of the face, in particular, of its permanent structure. I attempt to explain the understanding of ‘permanent structure’ using Lavater’s (1869) definitions of physiognomy and pathognomy. Physiognomy seeks to obtain knowledge about personality by evaluating permanent parts of a face while they remain still. In contrast pathognomy studies emotions, which are displayed by facial parts while in motion (Lavater, 1869). Out of these two, physiognomy is the notion that Lavater (1869) links with the sum of character and inclinations, and it forms the basis for pathognomy, which describes what people become at certain instants.

Physiognomy is a longstanding topic that reaches from antiquity (Whiteside, 1974; Tickle, 2011) and has been practiced in different parts of the world such as Europe, Asia, and America (Tickle, 2011). Therefore, physiognomy has accumulated extensive theoretical material to support it. In the next paragraphs, I provide a brief historical retrospective with accent on publications, which according to the authors of the 20<sup>th</sup> century (e.g. Liggett, 1974; Rutkowska, 2010) shaped the field as it exists today. Following, I review research related to physiognomy in order to provide information about the development of the field today. In the final subsection, the framework for the application of physiognomic knowledge in the practice of this research is discussed.

### 2.5.1 Brief History of Physiognomy

The concept of judging character based on appearance, mainly the face, was developed in ancient Greece (Rutkowska, 2010; Kamenskaya & Kukharev, 2008; Liggett, 1974).

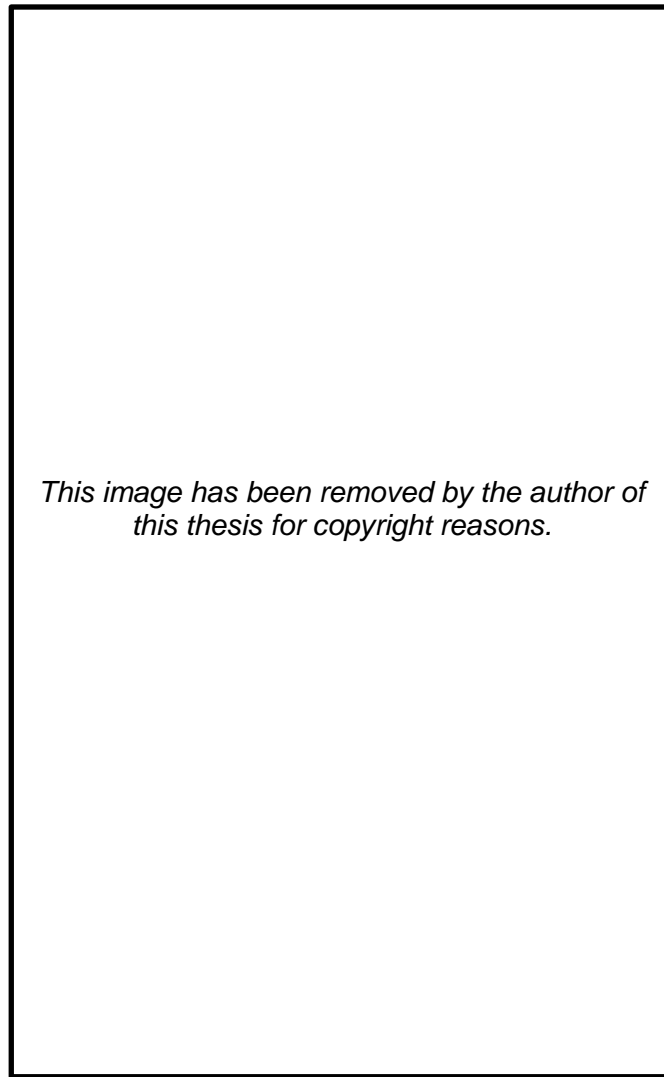
According to Liggett (1974), more than a hundred classical Greek and Roman philosophers were evidently interested in physiognomy and contributed to the subject, including Socrates, Plato, and Aristotle. Aristotle (384 BCE – 322 BCE) is considered the author of *Physiognomonica*, the first systematic work devoted to physiognomy (Amadio, 2014; Chopra & Tikkanen, 2012; Bolle, Buxton, Smith, et al., 2011). Physiognomy is not only an ancient, but also a widespread theory (Liggett, 1974). In China, the practice of face reading was documented from the time of Confucius (Rutkowska, 2010). Arabian philosophers Avicenna and Averroes, as well as Persian physicians Rhazev and Ali ben Ragel, were also advancing physiognomy and, in particular, the ideas of Aristotle on physiognomy (Liggett, 1974).

The interest in physiognomy arose at the end of the Middle Ages in Western Europe, when Michael Scot, the astrologer of Frederick II, wrote *De Hominis Physiognomia*, the first printed book about physiognomy (Liggett, 1974). According to Liggett (1974), this book, written in 1272 and printed two centuries later (1477), signifies the first attempt to explain physiognomy by discussing facial forms from the psychological position, with attention to the role of particular muscles and nerves. Yet, because Michael Scot was an astrologist, *De Hominis Physiognomia* (1272/1477) was received with scepticism and assigned to astrology. Another known attempt to establish the image of physiognomy as a serious principle was the six-volume *Of Celestial Physiognomy* by Giovanni Battista Della Porta, published in 1627 (Liggett, 1974). Della Porta promotes the view that facial features of a human are the result of their temperament and not of astrological signs (Liggett, 1974). Unfortunately, for the field of physiognomy, Della Porta also claims that human character may be understood through analogies in appearance drawn from animals. His idea that a person having resemblance with a certain animal would have personality traits resembling the nature of this animal (Figure 16) discredited his overall work (Liggett, 1974).

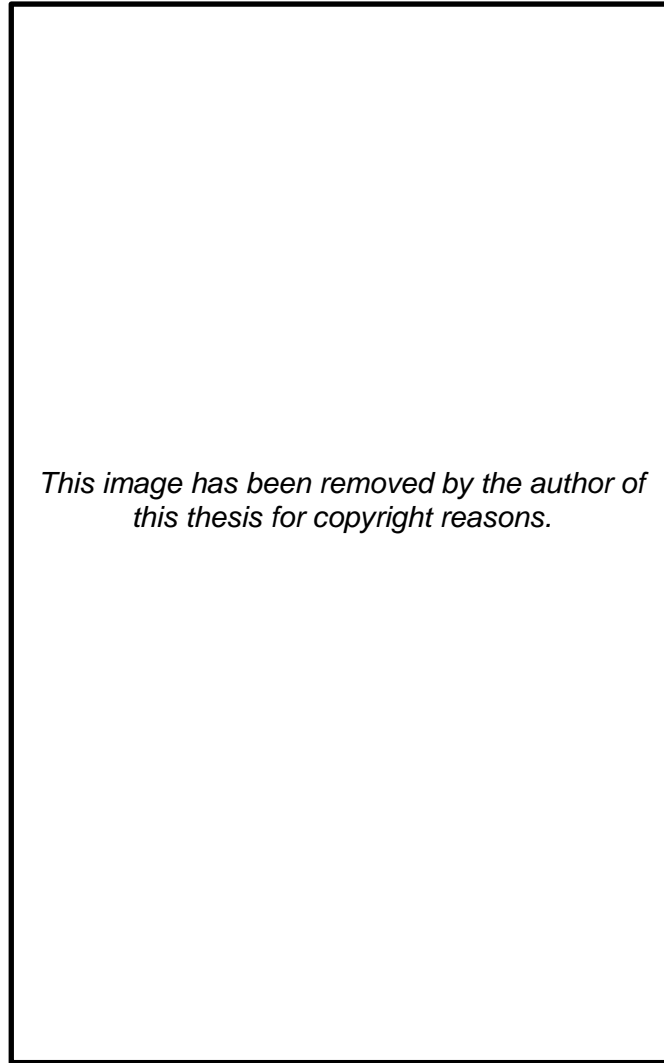
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for copyright reasons.*

*Figure 16.* Della Porta assumed that the person with appearance resembling one of a goat is as the goat, stupid (Liggett, 1974, p. 186)

Probably the most significant contribution to the field of physiognomy belongs to the Swiss pastor and teacher Johann Kaspar Lavater (Liggett, 1974; Kamenskaya & Kukharev, 2008). His *Essays on Physiognomy* (1869) was first published in 1772 and was regularly reprinted up to the 1870's (Figures 17, 18). His work suggests a classification system and set of principles regarding the correlation between outer appearance and personality (Lavater, 1869; Erle, as cited in Kamenskaya & Kukharev, 2008). Liggett (1974) states that Lavater's work significantly advanced physiognomy, because it marks the effort to base physiognomic descriptions on naturalistic observations. The nineteenth-century anatomist Sir Charles Bell agreed with Lavater's ideas, and "even the sober Encyclopaedia Britannica, in its eighth edition, found itself impressed with Lavater's Physiognomy" (Liggett, 1974, p. 190). Still, *Essays on Physiognomy* received its share of criticism. The work was criticized for the frequent use of metaphorical language, utter ignorance of face anatomy and lack of guiding rules (Liggett, 1974; Reuter, 2008). Reuter (2008) concludes that, given that Lavater's physiognomic approach is lacking systematic reasoning, it is rather pseudoscientific. However, Lavater (1869) himself states that physiognomy requires explicit principals in order to become science. He also forecasts criticism and states that *Essays on Physiognomy* does not include an absolute system, but may become a foundation of such.



*Figure 17.* Some of possible types of mouths according to Lavater (1869, plate LXXV)



*Figure 18.* Some of the possible appearances of noses, drawn by Lavater (1869, plate LXXIV)



Interest in physiognomy declined in the 18<sup>th</sup> century, but has risen anew in the 20<sup>th</sup> century (Kamenskaya & Kukharev, 2008). Physiognomy returned as both a revived model of classical physiognomy (Kamenskaya & Kukharev, 2008) and a field of scientific interest (Rutkowska, 2010; Kamenskaya & Kukharev, 2008; Bar, Neta, & Linz, 2006; Stirrat & Perrett, 2010). Physiognomy in the 20<sup>th</sup> century is practiced under new names, such as ‘face language’ (Whiteside, 1974), ‘face reading’ (Rosetree, 2001), and ‘personology’ (Tickle, 2011; Carroll, 2013). Practitioners of personology and face reading, in contrast to those of classical physiognomy, often use more precise charts of face reading, where particular features of appearance are correlated to certain personality traits (Whiteside, 1974; Rosetree, 2001; Tickle, 2011). Meanwhile, researchers gradually proved that a correspondence between appearance and personality traits exists (Kamenskaya & Kukharev, 2008; Stirrat & Perrett, 2010).

### 2.5.2 Scientific Inquiries regarding the Correspondence of Character and Appearance

According to the dates of studies reviewed in this thesis, the basic physiognomic assumption that appearance indicates inner nature (Lavater, 1869) has been repeatedly confirmed by research over the last two decades. For example, Alley (as cited in Berry, 1993), reports the ability of people to make above-chance judgments about intelligence based on the face appearance. Bull and Green (as cited in Berry, 1993) mention findings that people are able to separate facial photographs of criminals from noncriminals, and match criminals’ appearances to the kinds of crimes they committed at above-chance levels. Stirrat and Perrett (2010) found that people tend to use the ratio of facial width and height to estimate trustworthiness. They showed that people with wider faces were more inclined to take advantage of trust and that people correspondingly were less willing to trust men with wider

faces. Kamenskaya and Kukharev (2008) note that the correlation between the squareness of the jaw and testosterone levels has been established (Manning, as cited in Kamenskaya & Kukharev, 2008; Fink, Grammer, Mitteroecker, Gunz, Schaefer, Bookstein, & Manning, as cited in Kamenskaya & Kukharev, 2008). Researchers also attempted to explain why correlations between personality and appearance may exist. Malatesta, Fiore, and Messina (as cited in Bar et al., 2006) and Zajonc (as cited in Bar et al., 2006) suggested that facial traits may display character because they can become adjusted in accordance with personality traits. Namely, because the structure of the face is affected by the most frequently repeated facial movements and expressions. Interestingly, a similar idea has been proposed earlier by Dunlap (as cited in Goldstein, 1983), Evelyn (as cited in Liggett, 1974) and Lavater (as cited in Liggett, 1974).

The results of research on the correlation of facial appearance and personality traits are generally questioned in their validity (Berry, 1993; Carroll, as cited in Kamenskaya & Kukharev, 2008) due to the particular difficulties in conducting physiognomic studies. For example, even though some studies showed that people can judge intelligence or criminal tendencies of another person on the basis of facial photographs (Bull & Green, as cited in Berry, 1993), it is not understood how participants made their decisions (Berry, 1993). Also, as Kamenskaya and Kukharev (2008) note, despite the significant advances of the trait theories, there is still no certainty about how many personality traits exist.

Even though the validity of physiognomy might be questionable, academics, to different degrees, believe that the human face is able to provide information about personality traits (Rutkowska, 2010; Bar et al., 2006; Stirrat & Perrett, 2010; Kamenskaya & Kukharev, 2008; Wechsler, 2007). For example, Kamenskaya and Kukharev (2008) state that the face provides

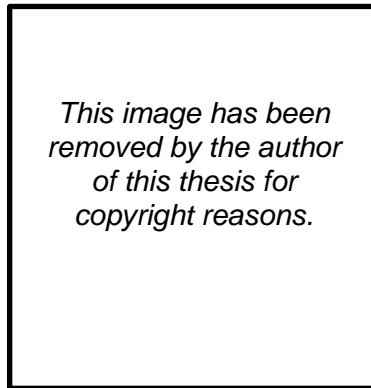
a more objective source of information about personality traits than psychological or neuropsychological tests. If a person can fake answers and even unconscious reactions, to fake their face is highly problematic. The shape of nose, for example, cannot be changed momentarily. According to Liggett (1974), the possible reason of physiognomy's vitality is the fact that people naturally seek to understand each other, and, as Kamenskaya and Kukharev (2008) note, they tend to reach this understanding by evaluating faces. To conclude, Rutkowska (2010) is convinced that as long as the idea of physiognomy has its supporters, it deserves to be researched.

### 2.5.3 Application of Physiognomy in Practice

To achieve physiognomic reading, that is, to obtain information about personality features by evaluating permanent facial traits, one requires two kinds of data: a systematic description of facial traits and a systematic description of personality qualities (Liggett, 1974). Both sorts of data should be correlated to each other, so that one is able to choose the facial trait and obtain information about possible personality traits (Liggett, 1974). Publications about physiognomy provide such information with different degree of precision, which is due to the personal style of authors (e.g. Lavater, 1869; Whiteside 1974, 1988; Rosetree, 2001; Tickle, 2011). For example, a contemporary research developed special software that able to estimate personality traits on the basis of facial traits (Kamenskaya & Kukharev, 2008; Rutkowska, 2010). Here, I briefly consider use of both sources for physiognomic reading, publications, and software.

The example of classical physiognomy, as assumed by contemporary authors (Tickle, 2011), is *Essays on Physiognomy* by Johann Kaspar Lavater. The more recent publications about

physiognomy, revived under names such as ‘personology’ and ‘face reading’, were published in the second half of the 20<sup>th</sup> and the beginning of the 21<sup>st</sup> century. These include *Face Language: How to Read Anyone’s Face like a Book* (Whiteside, 1974), *Face Language II* (Whiteside, 1988), *The Power of Face Reading* (Rosetree, 2001), and *What Makes People Tick & Why: The Answers are in The Face* (Tickle, 2011). Each of the publications offers the reader interpretations of personality traits based on facial features. Descriptions are commonly categorised on the basis of facial traits. For example, Rosetree (2001) groups descriptions according to eyebrows, ears, noses, cheeks, mouths, jaws and chins. Whiteside (1974) arranges personality traits according to eyes and areas around the eyes, lips and lines, proportions, and so on. Tickle (2011) offers separate chapters to evaluate the appearance of eyes, nose, eyebrows, jaw, forehead, cheekbones, ears, and lips. Lavater (1869) describes personality traits to the certain types of facial features, such as forehead, eyes, eyebrows, nose, mouth, lips and chin (Figures 17, 18), and also suggests judgment on personality based on the face as a whole - without reference to the distinct parts (Figures 19, 20).

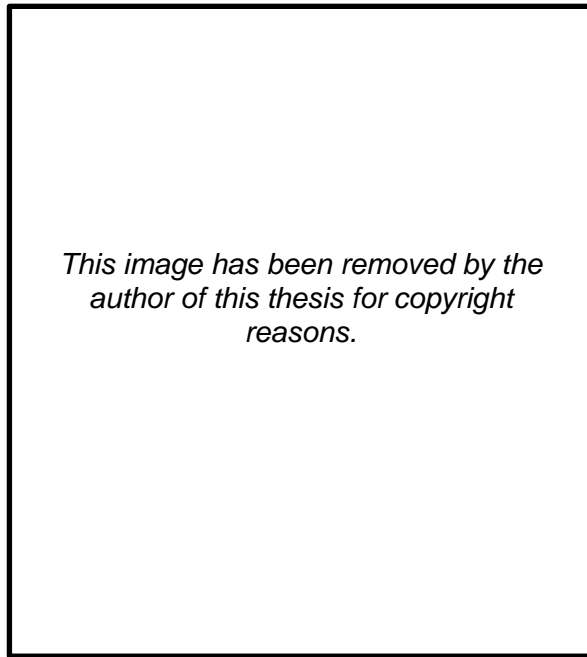


*Figure 19.* Lavater (1869) describes this appearance (plate XIV) as “A countenance remarkable for the beauty, but harmony of its features—pleasing, because calm, dispassionate, benevolent, noble, wise” (p. 112)

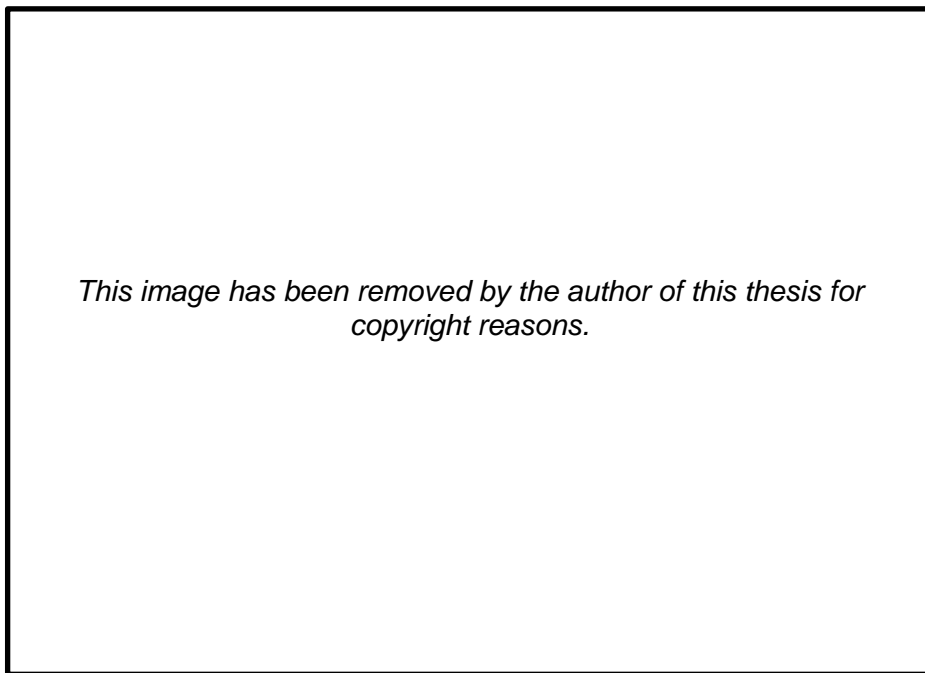


*Figure 20.* Lavater (1869) describes this face (plate XIII) in the following manner: “Virtue, noble simplicity, goodness, open confidence, are not discoverable here. Unbounded avarice, unfeeling wickedness, knavery unequalled, in the eye and mouth, eradicate every

The reading of facial traits based on physiognomic assumptions was realised in digital software that analyses facial features in order to obtain information about psychological characteristics (Kamenskaya & Kukharev, 2008). Examples of such software are “Digital physiognomy” introduced by Uniphiz Lab (Kamenskaya & Kukharev, 2008; Rutkowska, 2010; "Digital Physiognomy", 2014) and the “Visage” project, presented by Dr. Paul Ekman (Kamenskaya & Kukharev, 2008; "Visage Project for Physiognomy Data", n.d.). The “Visage” project offers physiognomic reading of limited variants of the relatively permanent facial features: forehead, brows, eyes, eyelids, nose, mouth, jaw, cheeks, chin, and ears. Its authors ("Visage Project for Physiognomy Data", n.d.) claim that the application bases its analysis on a database of various publications about physiognomy and face reading. Figure 21 shows the example of the interface of the application “Visage”. The other software, “Digital Physiognomy” works like an identikit tool. The facial traits, characteristic of one’s appearance are chosen from the offered variations of each trait. “Digital Physiognomy” examines following traits: eyes, eyebrows, forehead, cheekbones, chin, nose, mouth and ears ("Digital Physiognomy", 2014) (Figure 21). According to selected features, the program decides about psychological characteristics, for example adventurism, honesty, or philanthropy, and bases its result on the Myers-Briggs typology of personality types (Kamenskaya & Kukharev, 2008).



*Figure 21.* The interface of the application “Visage” on the example of facial features “Eyes” and “Eyelids” “Visage”, n.d.)



*Figure 22.* Interface of the software “Digital Physiognomy” (as cited in Kamenskaya & Kukharev, 2008, p. 68)

Due to their automatized character “Digital physiognomy” and “Visage” present only information that is specific to chosen facial traits. Consequently, these projects do not allow the user to participate in the process of application of physiognomic knowledge. As the main topic of this subsection is to deploy how one may apply physiognomy in practice, this review focuses further on physiognomic descriptions found in mentioned publications of Lavater (1869), Whiteside (1974, 1988), Rosetree (2001), and Tickle (2011).

As it was mentioned, each work about physiognomy reviewed in this section (Lavater, 1869; Whiteside, 1974; Whiteside, 1988; Rosetree, 2001; Tickle, 2011) presents information about facial features and corresponding personality traits, where information about personality traits is organised according to the type of facial features. In other words, the authors describe personality traits that match to a certain type of nose, rather than explaining which facial features might belong to each character feature, such as generosity. Each of the authors presents information in his own style of writing and pictures, which demonstrate particular facial traits. For example, straight eyebrows are interpreted in each of the authors own words. Lavater (1869) assumes that a man with horizontal brows hardly can be a fool (Figure 23). Whiteside (1988) asserts that the person with straight brows is an aesthete, enjoys art and likes beautiful things (Figure 24). Rosetree (2001) states that a person with straight brows is an intellectual, good in noticing ideas, and logical (Figure 25). In turn, Tickle (2011) characterises the person with straight brows as one, who appreciates the beauty of things and has an innate sense of harmony and balance (Figure 26).

As it appears, Lavater (1869) and Rosetree (2001) characterise straight brows in a similar manner, assuming that the person with this facial trait is likely an intellectual, while Whiteside (1988) and Tickle (2011) agree that the person with straight brows is likely an



aesthete. None of the opinions suggest contradictory information. Moreover, the succession of ideas can be traced among these approaches. For example, Lavater's input in physiognomy is mentioned in Rosetree (2001) and Tickle (2011). Whiteside (1974) refers to Aristotle. Tickle (2011) mentions the works of both, Whiteside (1974) and Aristotle.

*This image has been removed by the author of this thesis for copyright reasons.*

Figure 23. Possible types of horizontal brows according to Lavater (1869, p. 390)

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Figure 24. Straight brows, according to Whiteside (1988, p. 29)

*This image has been removed by the author of this thesis for copyright reasons.*

Figure 25. Straight brows, according to Rosetree (2001, p. 67)

*This image has been removed by the author of this thesis for copyright reasons.*

Figure 26. Appearance of eyebrows with straight underside line (Tickle, 2011, p. 89)

For the purpose of this study and as an example of physiognomic descriptions, I use the physiognomic data described by Tickle (2011). These physiognomic readings are briefly summarised in a table (Table 1) for the convenience of use. Detailed information is found in the book *What Makes People Tick and Why: The Answers Are in the Face* (Tickle, 2011). Like Lavater (1869), Whiteside (1974) and Rosetree (2001), Tickle (2011) systematizes personality descriptions based of facial traits. The table contains the following information for each facial trait, as presented in the publication: description of the trait, illustration of the trait, name of the corresponding personality trait, and a brief explanation of the personality trait. Only facial features that can be seen from the front are included in the table. This is in accordance with Rosetree (2001), who suggests that, for better results, physiognomic readings should be done by looking at face from the straight angle. An exception was made for some of the illustrations of noses, because Tickle (2011) does not provide front illustrations for most of the nose types.

Physiognomists' advice of how to apply physiognomic knowledge in practice can be summarised into several principals. To be able to apply physiognomy and read personality traits from peoples' faces, one should be genuinely interested in people (Tickle, 2011; Whiteside, 1974; Rosetree, 2001; Lavater, 1869), be a careful observant (Tickle, 2011; Whiteside, 1974; Lavater, 1869), and evaluate faces critically (Rosetree, 2001). It is also important to practice more in application of physiognomic rules in order to obtain experience in distinguishing certain facial traits (Tickle, 2011; Rosetree, 2001). It is also necessary to keep the process simple: skip the average facial traits and focus on the characteristics with extreme exponents. This means that one's face should be evaluated based on the most expressive facial traits (Whiteside, 1974; Tickle, 2011; Lavater, 1869), because, according to Whiteside (1974), the more pronounced the trait, the more it reflects the inner personality of

its owner. Similarly, Tickle (2011) describes and illustrates the extremes of traits, both facial and personality, which are included in Table 1. To summarise, to achieve the physiognomic reading of a face one should carefully observe the face, take an independent decision about what facial traits are the most expressive for the chosen face, find the selected facial traits in the chosen physiognomic approach, and obtain interpretation of personality traits (Tickle, 2011).

According to the authors (e.g. Tickle, 2011; Rosetree, 2001) the theory of physiognomy, as well as physiognomic data, is universal across cultures and applicable to every adult independently of the gender, age, or race. It is preferable to make physiognomic readings by evaluating adult faces because, for the optimal esteem of personality traits from the facial traits, face should develop according to personality (Rosetree, 2001; Tickle, 2011).

According to Rosetree (2001) the age benchmark is eighteen years. Regarding the requirements to the professional level of the potential physiognomists, Tickle (2011) and Rosetree (2001) are unanimous in their opinion that everyone has the potential to make physiognomic readings, at least at the initial level, using books about physiognomy.

**Table 1.** *The chart of facial features and corresponding personality traits, completed on the basis and using original physiognomic descriptions and illustrations of types of facial traits, published in What Makes People Tick and Why: The Answers Are in the Face*

<i>Facial features</i>	<i>Personality characteristics</i>
<b>The Face</b>	
“The Asymmetrical Face” (p. 21)	“Mood Swings” (p. 21)
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	Quantity of asymmetries in one’s face determines the amount of mood changes. The more of asymmetries, the higher the possibility of extreme mood changes
<b>The Eyes</b>	
The space between the eyes signifies how tolerant the person is. Tolerance designates the ability of a person to tolerate the situation before he/she responses	
“Narrow space between the eyes” (p. 23) (less than the width of one eye)	“Low Tolerance” (p. 23)
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	The person with narrow eyes reacts to the situation faster and more intensely; likes to follow rules; totally focuses on the current task; works better when not multitasking

<p>Wide space between the eyes (p. 23) (more than the width of one eye)</p>	<p>“High Tolerance” (p. 23)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with wide eyes takes time before responding to the situation; can be considered a relaxed person; focuses on several tasks at once; has a tendency towards multitasking</p>
<p>The level of the inner corners of the eyes shows if the person has a tendency to be “judgmental” (p. 34) towards things, people and situations as opposed to the “conventional” (p. 34) nature of those, who have the inner corners of both eyes on the same level.</p>	
<p>The inner corners of the eyes are on different levels</p>	<p>“Judgmental” / “Unconventional” (p. 34)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this trait tends to judge and do things in their own way as opposed to the traditional way</p>

The amount of folded skin on eyelids demonstrates the degree in which the person has an analytical nature

“Eyelid covered with fold of skin” (p. 37)

“Highly Analytical” (p. 37)

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The person with this trait tends to thoroughly analyse things prior to taking a decision

<p>“Eyelids completely exposed” (p. 37)</p>	<p>“Low Analytical” (pp. 37, 42)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this trait prefers to act straight away and does not find it useful to spend time on long analysis or discussions</p>
<p>The level of the outer eye corners compared to the inner corners indicates how critical the person is</p>	
<p>Outer corners of eyes are lower than inner corners</p>	<p>“High Critical Perception” (p. 44)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this trait tends to be critical and notices others’ mistakes; good in noticing mistakes</p>
<p>Outer corners are higher than inner corners</p>	<p>“Low Critical Perception” (p. 44)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this trait tends to be less critical and notices achievements of others rather than mistakes; can miss mistakes</p>



The size of irises signifies if the person is inclined to express emotions	
“Large irises” (p. 51)	“High Emotional Expression” (p. 51)
<i>This image has been removed by the author of this thesis for copyright reasons.</i>	The person with this trait tends to be very emotional, affectionate and openly shares his/her feelings with others
“Small irises” (p. 51)	“Low Emotional Expression” (p. 51)
<i>This image has been removed by the author of this thesis for copyright reasons.</i>	The person with this trait does not let emotions interfere with the process of decision-making. This person can be accepted as unemotional
The depth of the eye colour and the amount of sparkle in the eye demonstrates the degree of magnetism in one’s personality	
“Eyes sparkle” (p. 55)	“High Magnetism” (p. 55)
<i>This image has been removed by the author of this thesis for copyright reasons.</i>	The person has magnetic personality and may be accepted by others as flirtatious
“No sparkle in the eye” (p. 55)	“Low Magnetism” (p. 55)
<i>This image has been removed by the author of this thesis for copyright reasons.</i>	The person has little personal charm

<b>The Nose</b>	
“Ski Jump Nose” (p. 59)	“The Ministrative Nose” (p. 59)
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	The person with this trait likes helping other people and automatically responds to others’ needs; finds it difficult to refuse people’s requests and not good at money management
“Convex Nose” (p. 63)	“The Administrative Nose” (p. 63)
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	The person with this trait likes to be in charge; very interested in material values; good at money-management
“Straight Bridge” (p. 67)	“Administrative/Ministrative Nose” (p. 67)
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	Combination of “administrative” and “ministrative” personality traits
“Bulbous Nose” (p. 69)	“Inquisitive” (p. 69)
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	The person with this trait is interested in information and would like to know all the latest news, including news on a personal level

<p>“The Fussy Nose”: “a pointed nose” (p. 71)</p>	<p>“Very Fussy” (p. 71)</p>
<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>The person with this trait tends to be very picky and pays high attention to accuracy and cleanliness</p>
<p>“Down-turned Nose” (p. 73)</p>	<p>Very Sceptical: “Questions Everything” (p. 73)</p>
<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>The person with this trait “questions everything” and likes everything being proven; may be seen as someone who does not trust anyone</p>
<p>“Straight Nose” (p. 73)</p>	<p>“Not as sceptical” (p. 73)</p>
<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>Less sceptical than the person with a “Down-turned Nose”</p>

<p>“Upturned Nose”: “the nose angles up from the underside where it joins the lip” (p. 75)</p>	<p>“Very trusting” (p. 75)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>Trustful and open nature, believes in the good and trusts people even after being deceived</p>
<p>“Flared Nostrils” (p. 77)</p>	<p>“Self-Reliance” / “Extremely independent” (p. 77)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with “flared nostrils” is very independent in taking decisions, moreover, he/she tends to make decisions for other people; believes that his/her opinion is always right</p>
<p><b>The Eyebrows</b></p>	
<p>“Inverted V on top of the eyebrow” (p. 81)</p>	<p>“Design Appreciation” (p. 81)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this shape of brows has “a sense of overall structure” (p. 81) of any object of interest; has natural abilities for design</p>

<p>“The half-moon shaped eyebrow” (p. 84)</p>	<p>“Mechanical Appreciation” (p. 84)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this trait has the ability to assemble components into the whole; has an organised way of thinking and is able to successfully develop an idea of project into a finished job</p>
<p>“Outward flair of the outer edges of the eyebrows” (p. 86)</p>	<p>“Dramatic Appreciation” (p. 86)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this trait likes drama; he/she is a natural actor and generally likes to perform: whether on the theatre stage or simply by making a presentation</p>
<p>“Underside of Eyebrow Straight” (p. 89)</p>	<p>“Aesthetic Appreciation” (p. 89)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this type of brows appreciates the beauty of things; has an innate sense of harmony and balance of things; likes to improve the environment and make it better for everybody</p>
<p>“Low-set eyebrows” (p. 92)</p>	<p>“Affable” (pp. 92, 94)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with low set brows—the space between the top of the eye and the eyebrow is smaller than the height of the eye—appears to be easily approachable and less formal, and quickly becomes familiar with people whom he/she just met</p>

<p>“High-set eyebrows” (p. 92)</p>	<p>“Discriminating” (p. 92)</p>
<div style="border: 2px solid black; padding: 10px; text-align: center;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>The person with highly set eyebrows—the space between the top of the eye and the eyebrow is bigger than the height of the eye—likes to keep formality and does not appreciate familiarity</p>
<p><b>The Head: Proportions</b></p>	
<p>The width of the person’s face signifies a degree of self-confidence. The width of the face for this purpose is determined by comparing the width of the face, measured from the outer edge of one’s eyebrow to the outer edge of the other, with its length, measured from the chin to the outer edge of the forehead</p>	
<p>“Narrow Face” (p. 97)</p>	<p>“Builds confidence” (p. 97)</p>
<div style="border: 2px solid black; padding: 10px; text-align: center;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>Feels unconfident in new situations and tends to gain confidence by means of education and practice; aware of own limits; hesitant to start projects, he/she unfamiliar with</p>

<p>“Wide Face” (p. 97)</p>	<p>“High self-confidence” (p. 97)</p>
<div style="border: 2px solid black; padding: 10px; text-align: center;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>Self-confident person, likes to be a leader</p>
<p>The form of the outer line of the forehead demonstrates if the person is inclined to maintain things or construct new ones</p>	
<p>“Oval Forehead” (p. 104)</p>	<p>“To Conserve” (p. 104)</p>
<div style="border: 2px solid black; padding: 10px; text-align: center;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>Tends to preserve and save things in case they will be needed in the future; likes to work with and maintain long-term projects; does not tend to be adventurous</p>
<p>“Square Forehead” (p. 104)</p>	<p>“To Construct” (p. 104)</p>
<div style="border: 2px solid black; padding: 10px; text-align: center;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>Easy to part with old things: belongings or projects; likes to start new tasks and does not like to maintain long-term work; will rather buy a new thing than fix the old one; escapes the routine</p>

<b>The Jaw</b>	
“Square Jaw” (p. 135)	“Authoritative” (p. 135)
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>The greater the width of the jaw, the more authoritative the person seems; enjoys the role of being in charge and does not like to have a subordinate role</p>
“Pointed Chin” (p. 140)	“Automatic Resistance” (p. 140)
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>The person with this trait is stubborn, does not like it when someone tells him/her what to do and automatically rejects any suggestions when he/she feels pressured by someone</p>
“Square Chin” (p. 142)	“Pugnacity” (p. 142)
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>The person with this trait gives immediate rebuff in any situation; is good at debates, because he/she likes to defend his/her point of view; has “a “fighting spirit” (p. 142)</p>



<p>Length of the part of face from the chin to the nose compared to the whole length of the face indicates whether the person is stimulated by physical or mental activity</p>	
<p>“Distance from base of nose to chin”: long (p. 147)</p>	<p>“Physical Motive” / “Restless” (p. 147)</p>
<div style="border: 2px solid black; padding: 10px; text-align: center;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>The person with this trait likes to be active and stays in permanent motion; likes to be physically active and is very energetic</p>
<p>“Distance from base of nose to chin”: short (p. 151)</p>	<p>“Mental Motive” / “Stimulated by Mental Activity” (p. 151)</p>
<div style="border: 2px solid black; padding: 10px; text-align: center;"> <p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> </div>	<p>The person with this trait prefers mental activity to physical activity; enjoys mental contests</p>

<b>The Cheek Bones</b>	
“Prominent Cheekbones” (p. 165)	“Adventurous” (p. 165)
<i>This image has been removed by the author of this thesis for copyright reasons.</i>	The person with this trait likes to have changes in life and aims to escape routine; likes to travel and be where events happen
“No Prominent Cheekbones” (p. 166)	“Low Adventurous” (p. 166)
[no illustration]	The person with this trait prefers to travel on territories closer to home and often chooses to stay at home rather going somewhere
<b>Lips</b>	
“Thin Upper Lip” (p. 183)	“Concise” (p. 183)
<i>This image has been removed by the author of this thesis for copyright reasons.</i>	The person with this trait explains things briefly and clearly; does not like long talks; could have experienced some challenges in live that stimulated development of his/her concise and introverted nature
“Full Upper Lip” (p. 183)	“Verbose” (p. 183)
<i>This image has been removed by the author of this thesis for copyright reasons.</i>	The person with this trait likes to talk and tells everything in detail

<p>“Full Lower Lip” (p. 189)</p>	<p>“Generous” (p. 189)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this trait has a giving nature and is ready to share money or possessions with someone in need; likes to make presents and is ready to spend his/her time helping others</p>
<p>The length of philtrum—space from the top of the upper lip to the bottom of the nose—compared with the length of face signifies whether a person is inclined to pay much attention to his/her appearance and his/her reaction to criticism</p>	
<p>“Short Philtrum” (p. 192)</p>	<p>“Takes criticism very personally” (p. 192)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this trait pays much attention to his/her appearance; fears to be criticised and takes criticism personally</p>
<p>“Long Philtrum” (p. 195)</p>	<p>“Dry Sense of Humor“ (p. 195)</p>
<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p>	<p>The person with this trait pays no attention to criticism and accepts it with no harm to the self-esteem; less concerned with his/her appearance</p>

The upward or downward turn of the outer corner of the mouth signifies whether the person tends to have a pessimistic or optimistic approach to life

“Upturned mouth” (p. 200)

“Optimistic” (p. 200)

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The person with this trait tends to have optimistic views on life

“Down-turned mouth”  
(p. 200)

“Pessimistic” (p. 200)

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The person with this trait tends to see things the negative side; usually anticipates the worst development

## 2.6 Intuition

Intuition affords immediate understanding or knowledge without the intermediate steps of reasoning or logic (Moustakas, 1990; Dörfler & Ackermann, 2012). The understanding of the intuiting process is not yet finalized. Marta Sinclair, the author of *Handbook of Intuition Research* calls intuition a “fascinating yet illusive phenomenon” (Sinclair, 2011, p. xvii). Sinclair (2011) asserts that the lack of a comprehensive understanding of intuition is not due to the lack of knowledge about intuition per se, but the lack of a central structure to merge the diverse research about intuition.

The validity of intuitive knowledge in research has been long argued, because, in Western culture, logic is traditionally accepted as the prominent mode of reasoning (Sinclair, 2011). However, over the past two decades extensive research about intuition has been made and intuition in research has become more accepted (Dörfler & Ackermann, 2012; Sinclair, 2011). Today intuition is recognised by many as a valid means of obtaining knowledge which is on par with explicit knowledge gained through standardised research methods. Despite this acceptance, there are still many that do not accept the validity of intuition in research (Dörfler & Ackermann, 2012).

The processes of intuition are still waiting to be finalised into one comprehensive framework, however, the variety of approaches to study intuition is not the focus of this review.

Nevertheless, the present study will benefit from designating the features of intuitive knowledge, as it will foster general understanding of intuition. For example, Dörfler and Ackermann (2012) conclude that intuition has six characteristics.

Intuiting is *rapid* (often labelled instantaneous), *spontaneous* (does not require effort and cannot be deliberately controlled) and *alogical* (meaning that it does not necessarily contradict the rules of logic but does not follow them either). The outcome of the intuitive process is *tacit* (in that the intuitives cannot give account of how they arrived at the results), *holistic* (also often called gestalt, as it is concerned with the totality of a situation rather than parts of it), and the intuitor feels *confident* about their intuition (with no apparent reason in terms of evidence). (p. 547)

Intuition evidently plays an important role in gaining new knowledge and in research (Polanyi, 1962; Moustakas, 1990; Patton, 2002; Janesick, 2001; Linn Mackey, 2002). In particular, this research is a heuristic study carried out with qualitative methods. Since it combines knowledge of different fields – geography, art, physiognomy, human cognition, psychology and visual communications – it is also interdisciplinary. Thus, the position of practitioners towards the role of intuition in the context of gaining knowledge per se and also as an element of qualitative, heuristic and interdisciplinary research processes is briefly reviewed. Given the lack of precise knowledge about mechanisms of intuition, authors often explain intuitive processes metaphorically. Thus, support of authors' opinions with original quotes and keeping original terms when appropriate helps to understand their views better.

Polanyi (1962) describes intuition as an essential element in the process of gaining new knowledge, which helps to join the steps of formal procedures into a single framework that leads towards discovery. Speaking with Polanyi's terms, in this process, intuition is that "informal act" (p. 130), which helps to cross "the logical gap" (p. 130) between formal

procedures of computation. According to Polanyi (1962), the process of shifting from formal procedures of research to informal intuiting enhances the intellectual processes.

The manner in which the mathematician works his way towards discovery, by shifting his confidence from intuition to computation and back again from computation to intuition, while never releasing his hold on either of the two, represents in miniature the whole range of operations by which articulation disciplines and expands the reasoning powers of man (p. 131).

Janesick (2001) states that consideration of the researcher's intuition in any given research project is a step forward in understanding the researcher's role in qualitative research.

Sufficient understanding of the researcher's role in qualitative inquiry is important, since in qualitative research the researcher is the research instrument (Janesick, 2001; Patton, 2002).

Patton (2002) also recommends considering the researcher's intuition, however he refers to it as 'inspirations', and states that it adds depth to the inquiry. Janesick (2001) also mentions that attention to the intuitive processes may assist in understanding the nature of decision making in the research process – for example, why the inquirer decides to go to the studied setting on a certain day – and thus, to improve the process of qualitative research.

Moustakas (1990) introduces intuition as one of the processes of heuristic research. He states that intuition makes it possible to understand things in a holistic way and explains this with an example which perfectly demonstrates his point and will be referred to later on in this research:

For example, one can view a tree from many angles, sides, front, and back; but one cannot see a whole tree. The whole tree must be intuited

from the clues that are provided by careful observation, experience, and connecting the parts and subtleties of the tree into patterns and relationships that ultimately enable an intuitive knowing of the tree as a whole. (p. 23)

Moustakas (1990) states that intuition is crucial in discovering “patterns, relationships, and interferences” (p. 23) in data which leads to enhanced meanings and ultimately to new knowledge.

Regarding argument for employing intuition in interdisciplinary research, Linn Mackey (2002) claims that interdisciplinary research is essentially an intuitive process, which, in the process of combining diverse knowledge, largely relies on intuitive reasoning rather than established rules. Linn Mackey (2002) also asserts that according to post-positivist views, science significantly relies on intuitive practices and concludes that if this is true for each given scientific field, it is equally true for interdisciplinary research.

## 2.7 Literature Review: Summary

The literature review is completed in order to provide the theoretical framework for the preliminary research question, “How personal impressions about place may be embodied in an image of the human face using anthropomorphism and physiognomy?”

Humanistic geography provides a definition of the key concept in this research, ‘personal impressions about place’. In humanistic geography, ‘place’ is a physical location, understood through the concept ‘sense of place’, the sum of one’s perceptions, reactions to the these, and emotions, resulting from the personal contact with the place and its elements (Tuan, 1975,



1979). Equating 'personal impressions about place' from the initial research question with the concept 'sense of place' of humanistic geography permits one to collect the 'personal impressions about place' in accordance with the established theory of humanistic geography. In particular, Tuan (1979) explains that one grows a sense of place by means of personal presence, employing all five senses, and fixing one's emotional reactions to the perceptions obtained at the place.

Anthropomorphism and physiognomy combined support the two-step process for identifying facial traits based on personal impressions about place. The theory of anthropomorphism, suggested by Persson et al. (2000), frames the process of reasoning about features of non-human entities, i.e. landscapes, in terms of human personality traits. It also suggests that it is natural for humans to outline personal impressions about non-human entities by using familiar concepts of human character features. In turn, Epley et al. (2007) explain that, when people anthropomorphise, they rely on knowledge about self and others. The synthesis of the two opinions allows me to conclude that place may be assigned with human personality traits based on one's own knowledge about self and human characters.

The theory of physiognomy proposes an interrelation of personality traits and facial traits (Rosetree, 2001; Rutkowska, 2010). The publications contain physiognomic descriptions, where guidelines for defining character traits, based on the appearance of one's face, are provided. As an example, and for the purpose of this study, a physiognomic chart (Table 1) was completed based on the approach suggested in Tickle (2011). The chart contains a number of facial traits assigned to personality traits, which, as suggested, can be found in the same person. Normally, physiognomists identify personality traits based on the facial

appearance. For the purpose of this research, I suggest applying the theory inversely, in order to obtain facial traits on the basis of the given personality traits.

The reviewed literature confirms the significance of this study. For example, Tuan (1979) confirms the importance of creating a visual depiction of place according to personal impressions. He states that one knows place through the sense of place. In order to make this knowledge shared, the sense of place should be expressed and depicted. The task of depicting the sense of place is assigned to writers and especially to artists, whose special skill enables them to express their sense of place in a tangible form (Tuan, 1975; Entrikin, 1994).

Remarkably, despite the differences in artists' approaches to depict reality, every painting validly captures the world, because it shows an artist's personal vision (Arnheim, 1947).

Furthermore, the anthropomorphic depiction of place, or explanation of its qualities in terms of human personality is common practice, because people are naturally predisposed to understand world in human terms (Boyer, 1996; Waytz et al., 2010). Artists depict countries in the human form (Harvey, 1868) and writers describe cities by employing human qualities (Depa, 2013) because it is a cogent way to explain the characteristics of territories to the reader or viewer.

The choice of using a human face in order to depict one's impressions about a physical location also proves to be beneficial, because humans are attuned to know each other through face and face-related metaphors. Not only do humans recognise each other by looking at faces (Young et al., 2008), they are also attuned to understand each other by expressing complex concepts through 'face'-metaphors, such as 'straight face' (Garland-Thomson, 2006, p. 175), or to even encompass one's overall image in the notion 'face' (Goffman, 1972).

The literature informed and refined the research question, which is now as follows: “How can a method of embodying one’s sense of place in an image of the human face be established using theories of humanistic geography, anthropomorphism and physiognomy?” To answer this question, I suggest a framework, which builds on the reviewed theories, and is referred to in this thesis as ‘face-method’. The framework consists of four steps.

- 1) Building a sense of place by spending time at a physical location.
- 2) Interpretation of the information on the established sense of place anthropomorphically, as personality traits.
- 3) Comparison of personality traits with those described in physiognomy. Obtaining the facial traits, which correspond to the personality traits.
- 4) Creation an image of a face based on the facial traits, acquired in the previous step.

The next chapter discusses methodology used for testing these hypothetical steps in practice.

### Chapter 3: Methodology

This research is carried out using heuristic methodology. Heuristic research is a form of qualitative inquiry that focuses on the exploration of meanings of human experience and aims to establish methods and processes, which can be further developed (Douglas & Moustakas, 1985; Moustakas, 1990). In this research, several dimensions of human experiences, such as

the tendency to anthropomorphise (Guthrie & Stefon, 2008), and the tendency to pay special attention to the perception of faces (Young et al., 2008), are brought together to explore the possibility of portraying a place or physical spaces an image of the human face, and to propose a framework that allows embodying personal impressions about place in an image of the human face.

Heuristic research is founded on a question of intense personal interest, which the inquirer searches to understand (Moustakas, 1990). The idea for this study emerged as a result of my interest in the field of visual communication and owing to the experience obtained from visiting different places in Auckland. Though places of the same city, to me they appeared strikingly different. The places felt different and seemed to have different characters, just like people, who have different personalities and appearances, especially faces. I was aware about physiognomy, the theory that assumes the correspondence of features of human appearance and personality traits. Having personal propensity for visual representations, I questioned myself: how would a place look if it had the face of a person?

The literature review completed for this study confirms that a face could be created to represent a place by using theories of anthropomorphism and physiognomy.

Anthropomorphism permits interpreting features of a place as qualities of human character (Persson et al., 2000). Physiognomy suggests that there is correspondence between certain qualities of human character and particular facial features (Tickle, 2011). However, prior to the beginning of the research, I had no certainty about how exactly this may be implemented. Therefore, I explore the method through the personal experience. This is done in accordance with the character of heuristic research, that accepts the personal experience as a valid mode

of obtaining new knowledge and permits the researcher to draw on their personal experience in order to advance universal knowledge.

Preliminary awareness of one's own knowledge and experience of a critical life issue, challenge, or problem enables one to begin a study of the problem or concern. As the inquiry expands, such self-knowledge enables one to develop the ability and skill to understand the problem more fully, and ultimately to deepen and extend the understanding through the eyes and voices of others.

(Rogers, as cited in Moustakas, 1990, p. 17)

The phases of heuristic research suggested by Moustakas (1990) helped to complete the research design and are fully described in the following Chapter 4: Research Design. In brief, these phases are *initial engagement*, when the research question is formulated based on the topic of interest. *Immersion*, an intense engagement with the topic of interest with the objective to elucidate the information needed for answering the research question. *Incubation*, a temporary retreat or pause from the research made in order to return to the topic and question it with a fresh perspective. *Illumination*, when information needed to answer the research question is identified and extracted from the data. *Explication*, when information needed to answer the research question is shaped into particular themes, or qualities. The concluding phase is the *creative synthesis*, when the researcher, entirely familiar with information about the topic of interest and its dimensions, creatively synthesises the research result in order to communicate it.

The data about sense of place is collected during fieldwork—a personal contact with the place—with use of the heuristic process of personal discovery. The process of personal

discovery implies collecting data with an open mode of reception (Moustakas, 1990). When personal contact with a place happens, I collect data about any feature of the place, which comes to my attention, and my reaction to it. The data is collected as notes and photographs. Due to the personal character of the discovery, the notes may involve the use of elements that are characteristic of heuristic study, such as metaphorical language or sketches, which add depth to the data. The collected data about sense of place is then analysed using the heuristic analytical framework discussed in the following chapter in order to uncover the characteristics of the place.

The idea, explored in the research implies the application of knowledge about anthropomorphism and physiognomy. Anthropomorphism is a persistent feature of the human cognition (Caporael & Heyes, 1997). While some researchers, such as Epley et al. (2007) and Persson et al. (2000), suggest explanations of how people anthropomorphise, it is universally agreed that a comprehensive explanation of anthropomorphism has not yet been finalized. Physiognomy is an ancient theory, which survived until today and remains an object of research interest (Kamenskaya & Kukharev, 2008) despite the fact that the exact correspondences between facial features and personality traits are still in the process of development (Stirrat & Perrett, 2010). I employ these two theories based on my intuition that combining the two may allow the development of a framework for embodying the sense of place in an image of the human face. Intuition is one of the processes of heuristic research and affords instant understanding or knowledge without the intermediate steps of reasoning or logic (Moustakas, 1990; Colman, 2009). According to Linn Mackey (2002), the research, which involves several disciplines, is initially an intuitive process that permits bringing knowledge of diverse fields together.

The other processes of heuristic research involved in this study are tacit knowing and focusing. Tacit knowledge is a fundamental concept of the heuristic inquiry. Moustakas (1990) explains the concept by referring to Polanyi:

Polanyi (1983) has stated that all knowledge consists or is rooted in acts of comprehension that are made possible through tacit knowing: ‘We all know more than we tell. Take an example. We know a person’s face, and can recognize a face we know . . . this knowledge cannot be put into words’ (p. 20)

Tacit knowledge is gained through experience and allows one to understand something as a whole from its parts (Moustakas, 1990). In this study, I use the tacit knowledge about my sense of place in both stages of data analysis and in the process of creative synthesis. For example, at the first stage of the data analysis I use tacit knowledge in order to identify the textual excerpts from the data, which signify the core characteristics of place based on my sense of place.

Focusing is the process that allows one to reveal characteristics of experience, which were out of the conscious attention “because the individual has not paused long enough to examine his or her experience of the phenomenon” (Douglas & Moustakas, as cited in Moustakas, 1990, p. 25). In this research, the process of focusing is implemented during fieldwork, when I make contact with the place in order to focus on the place, my reactions to it, and grow my sense of place. The benefits of using the process of focusing in this study are well explained by Moustakas (1990):

Focusing facilitates a relaxed and receptive state, enables perceptions and sensing to achieve more definitive clarification, taps into the

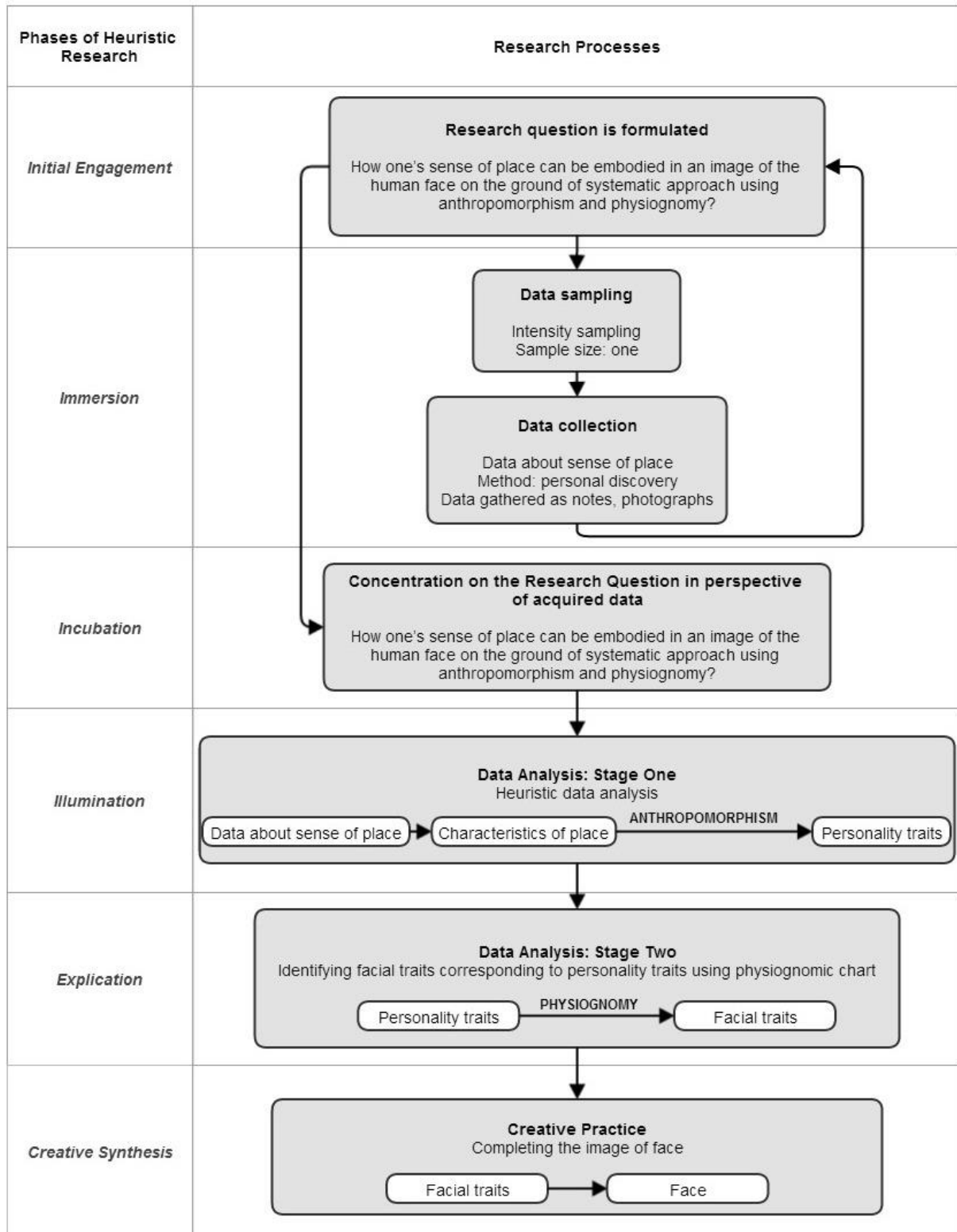
essence of what matters, and sets aside peripheral qualities or feelings.

(p. 25)

Heuristic research is completed with a creative synthesis; this is where the researcher synthesises and expresses the research findings. The results might be synthesised into various creative forms, for example a drawing or poem (Moustakas, 1990). The creative synthesis of this research involves the process of creating the face of place. At this stage, the facial traits, identified through the analysis of data about sense of a place, are brought together in an image of the human face. I complete an image of the human face by employing intuition about how to fit given facial features together and by using my tacit knowledge of the place that is to be portrayed.



Figure 27. Research design



The research framework is designed according to the phases of heuristic research. The research is completed within six heuristic phases, as suggested by Moustakas (1990); initial engagement, immersion, incubation, illumination, explication, and creative synthesis. A description of each phase and its processes is provided in the following paragraphs.

*Initial engagement* with the research topic results in the research question (Moustakas, 1990). The phase of initial engagement of this research reaches back to the summary of the literature review, when the preliminary steps of the possible ‘face-method’ are proposed. This heuristic research begins from the question, stated as the result of the literature review: How one’s sense of place can be embodied in an image of the human face using an approach involving theory of humanistic geography, anthropomorphism and physiognomy?

In the following phase, *immersion*, the heuristic researcher is fully engaged with the question. The aim is to become familiar with its terms and meet the condition to be open to receiving any information related to the question (Moustakas, 1990). During the immersion stage of this research, the data sample is identified and the process of data collection is completed. The sample is selected purposively, according to intensity sampling strategy and methodological guidelines regarding sample size. The data identified as required is the sum of human perceptions, emotions, feelings, and reactions evoked by the physical location and everything that is present at the location (Cresswell, 2009). The data about sense of place is gathered as textual notes, sketches and photographs during the personal engagement with the sampled place, or the personal discovery of the place. Notes, sketches and photographs are used as the basic qualitative instruments for the data collection. Personal discovery is the strategy of heuristic research, which accepts credibility of personal experience and suggests

that only the experienced person may provide valid information about the experience (Moustakas, 1990).

The third phase of the heuristic research is the period of *incubation*. During incubation, the researcher withdraws from the intense contact with the topic of interest (Moustakas, 1990). Patton (2002) explains incubation as the time when the researcher pauses, allowing space for forming new understanding and intuitive insights. In accordance with heuristic guidelines, during incubation, I put the data aside and stopped the active research process for some time in order to allow time to grow awareness about the research question in perspective of the collected data.

*Illumination* in heuristics is the phase, which is defined as “a breakthrough into conscious awareness of qualities and clustering of qualities into themes inherent in the question” (Moustakas, 1990, p. 29). The first stage of data analysis of this study belongs to the illumination phase. The data of notes and photographs about sense of place is analysed using the steps of heuristic analysis in order to identify the characteristics of the place, as portrayed in the data. During the concluding step of the heuristic analysis, characteristics of place are creatively synthesised and interpreted as personality traits. This process includes using the anthropomorphic framework identified for the within the section 2.3 Anthropomorphism of the literature review.

The *explication* phase within heuristic research involves complete clarification of the experience questioned by the research (Patton, 2002), or, as Moustakas (1990) states, the complete understanding of core dimensions of the experience. In this study, explication involves the second stage of data analysis. Personality traits, identified in the previous stage

of analysis, are matched to physiognomic descriptions in order to identify corresponding facial features. The facial features are the core constituents of the anticipated output of the research process, as they are used to create the image of the human face that is intended to portray the sense of place.

In the phase of *creative synthesis*, the core components of the researched experience are put together in order to portray the meanings of the research interest (Moustakas, 1990). The process of creative synthesis may result in creating a piece of art or literature. In this research, the creative work is undertaken in order to synthesise the obtained facial traits into an image of the human face. This image is the portrayal of the sense of place and the result of applying the approach explored in this research.

#### 4.1 Sample Type and Size

The data source is sampled according to the purpose of this study. This aligns with the guidelines of qualitative research, where sample choice is made according to purposeful strategies rather than methodological rules (Patton, 2002). The study aims to explore the idea of embodying one's sense of place as an image of a human face using systematic approaches found in anthropomorphism and physiognomy. According to Tuan (1979), one forms sense of place through the personal contact with the place, by perceiving it through all five senses and developing emotional attachment with the place. Thus, to establish sense of place, research requires a person and a place. As it is mentioned in Chapter 3: Methodology, this is personalized study. Therefore, I am the person who establishes sense of place. Further, I outline the parameters that were used to identify choice of place and conclude with introducing the location, sampled for this research.

The sample place is chosen according to the characteristics of a place, as understood in humanistic geography. According to humanistic geography, the borders of a place are not definite; it can be as small as a seat by the fireplace and as big as a country (Tuan, 1975). It also is characterised as the physical space without definite direction of movement. For example, the road cannot be a place, because movement happens in a particular direction, while a street corner can.

For the sample size, Patton (2002) recommends using “minimum samples based on expected reasonable coverage of the phenomenon given the purpose of the study” (p. 246). This research aims to explore the potential of the idea of the process of translating sense of place into an image of the human face. The sample size of one place is sufficient for this study, as it allows me to execute the process in full, and devote complete attention to the dimensions of one process. In addition, heuristic research allows conducting inquiry with a single sample (Moustakas, 1990). Intensity sampling of qualitative approach fulfils needs of identification of a place sample for the research. Intensity sampling involves use of “information-rich cases that manifest the phenomenon intensely, but not extremely” (Patton, 2002, p. 243).

Having taken into account the research purpose, definition of place in humanistic geography, and the requirements of the sample type and size, I choose Piha, a place in Auckland, as a sample for this study. Piha corresponds to the definition of place in humanistic geography as a place without definite direction of movement. Piha also has the potential to provide data-rich samples. This is because of two reasons. First, Piha is one of the most recommended tourist destinations in Auckland (“Browse places | Discover Auckland | Auckland NZ | AucklandNZ.com”, n.d.). Second, given my personal involvement in the data collection

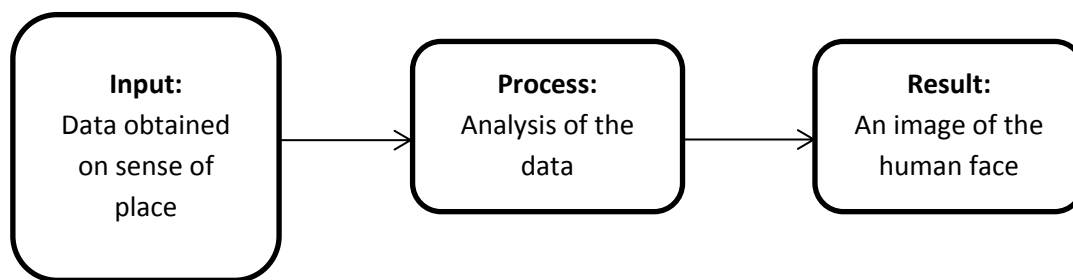
process and engagement with the place, I must say that Piha has long been a special place for me. A long time before I arrived to in New Zealand, shots of the sea shore from the movie *The Piano* by Jane Campion impressed me. Many years later, I saw the beach myself, though I never got a chance to stay there any extended time before undertaking this research. My genuine interest in Piha is one of the guarantees that my sense of place has potential to be developed and provide sufficient data for the research. Figure 28 shows Piha on the map of Auckland.

*This image has been removed by the author of this thesis for copyright reasons.*

*Figure 28.* Piha, the place chosen as a sample for the research, is directed with an arrow on the map of Auckland ("Map of Auckland :: ZoomIn")

## 4.2 Data Collection: Procedure and Methods

The data collection process belongs to the second phase of this research, immersion (Figure 27). This research is executed according to the six phases of heuristic research, as described by Moustakas (1990). Moustakas (1990) explains that during immersion, “the researcher lives the question in waking, sleeping, and even dream states” (p. 28). In this research, the question is the research objective, which is to explore the idea of embodying sense of place as an image of the human face using systematic approaches found in anthropomorphism and physiognomy. The process is described in detail in the beginning of Chapter 4: Research Design. The following figure shows the milestones of the process (Figure 29).



*Figure 29.* A schematic outline of the process of translation of the data of sense of place to and image of the human face. Outline is displayed to allocate major milestones of the process

As it is seen the research requires data about the sense of place. In this research, sense of place is defined according to humanistic geography as the sum of human perceptions, emotions, feelings and reactions, evoked by the physical location and everything that is present at the location (Cresswell, 2009). In other words, sense of place is a human condition. Information about this condition, recorded with notes and photographs, is the ‘input data’ of this research (Figure 29). This is a personalised study, because I explore the idea of



embodying sense of place in an image of the human face based on my own experience in order to be able to make informed conclusion about its workability. Thus, in order to obtain the data, my sense of place should need to be established during the immersion phase. In the following section, I outline and justify dimensions of the data collection procedure. Then, I detail the specific methods used to collect the data and explain, how the methods are implemented.

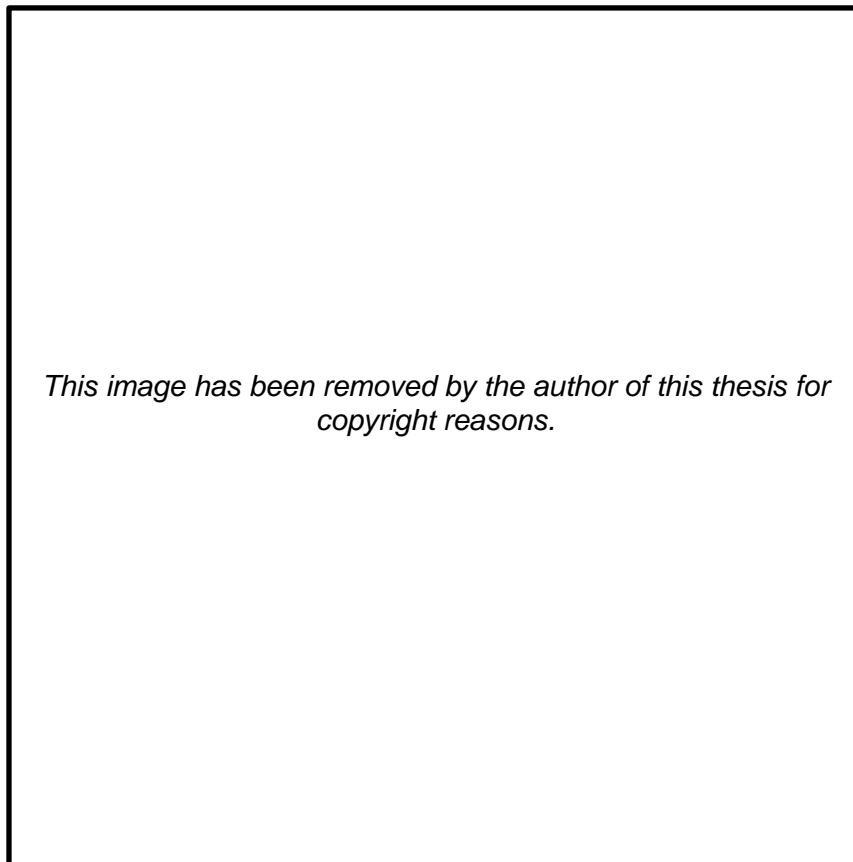
#### 4.2.1 Data Collection Procedure

The ultimate objective of the data collection procedure is to collect data about sense of place in notes and photographs. Sense of place is the sum of human perceptions, emotions, feelings and reactions, evoked by the physical location and everything that is present at the location (Cresswell, 2009). The procedure of collecting data is developed according to the theoretical knowledge about how sense of place is formed in people. The theory about sense of place and how it can be formed is reviewed in the section 2.1 Place.

The sense of place may be developed through the act of direct experience and personal contact with the particular physical location (Tuan, 1975, 1979; Relph, 2001). Thus, the procedure of data collection involves the personal contact with the sampled place. This aligns with the methodology of heuristic research, which implies personal contact of the researcher with the phenomenon of interest and accepts credibility of personal experience (Moustakas, 1990). According to the terminology of heuristic methodology, I define the procedure of developing sense of place by means of personal presence as a process of personal discovery of a place. For the convenience of language, I may also refer to the personal discovery of a

place as fieldwork. Fieldwork is the concept of qualitative research and denotes the process of collecting data in the real world, as opposed to a laboratory setting (Patton, 2002).

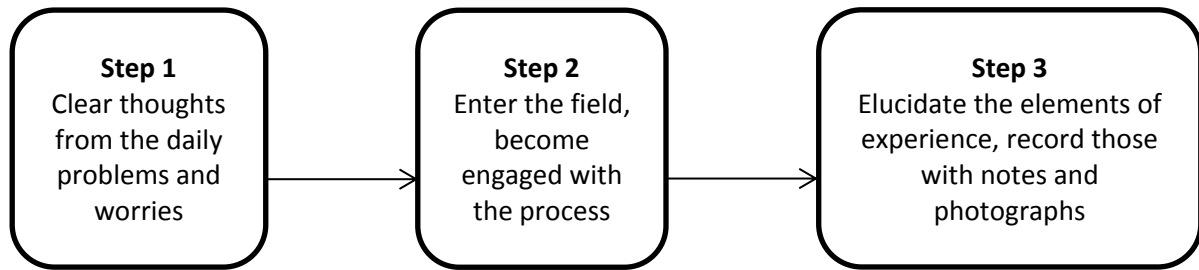
Place is an all-encompassing concept. The territory of Piha, the place, sampled for the research (Figure 30), is not small; the length of the beach is about 2.5 km ("Google Maps", 2014). Any point Piha's territory, marked approximately with a large circle on the map (Figure 30), may become an object of my attention when doing fieldwork. The initial focus is tentative as sense of place includes human reactions to every possible feature of the place (Tuan, 1979), and I may not foresee all aspects I might encounter during the fieldwork. Also, heuristic research requires an open approach to all possible dimensions of experience (Moustakas, 1990).



*Figure 30.* The small circle identifies the name of the place. The larger loop shows the potential physical space of the territory that may become a focus during fieldwork ("Wises Maps", n.d).

The initial focus is developed according to the theoretical knowledge about sense of place, covered in the section 2.1 Place. According to Tuan (1979) and Relph (2001), the sense of place is captured through human perception of place with all five available human senses: sight, hearing, smell, taste, touch, their synthesis, and one's reaction to them. Place is a physical location and is a part of the earth's surface that can be defined by the description of its air, soil, water systems, landforms, climate, plants, and animals (Castree et al., 2013; Henderson, 2009). A physical location may also include human made objects such as; buildings, parks, roads, signs, etc. (Cresswell, 2009). Thus, my initial focus, as a discoverer of a place, is on my perceptions of all the possible components of a physical space, including natural elements and human-made objects, the weather, flora, and fauna. My reactions to these elements and emotions are also included as part of the focus.

In this research, I adopt the steps of focusing, as described by Moustakas (1990), to arrange the process of fieldwork (Figure 31). For the first step, I clear thoughts from the daily problems and worries. I come to the place with an open mind, so I am able to see and accept my perceptions and feelings, react on them, and form my sense of place. As the second step, I enter the field and become engaged with the process of reception of information about place through my senses and through my reactions to these perceptions and the emotions, they cause. Within the third step, I elucidate the elements of my experience and record those in textual notes, sketches, or photographs. To summarise, by focusing I seek to reveal the characteristics of my experience of being at the place, and identify these in my conscious thoughts and feelings in order to be able to record data about the sense of place in notes and photographs.



*Figure 31.* The three-step focusing process of the data collection procedure

The duration of the fieldwork was specified according to the purpose of establishing sense of place and the methodological approach of the study. Heuristics state research cannot be run according to a schedule and lasts up to its natural closure, when patterns of the phenomenon emerge and become explicit (Moustakas, 1990). In this research, the phenomenon is my sense of the place. Thus, the fieldwork should be conducted up to the moment I reach the belief that my sense of the place is formed. However, this research is constrained by the time frame provided for the completion of a master thesis. Therefore, the fieldwork schedule is created with a possibility to extend it if required. Initially, seven days were scheduled for the fieldwork between October and November 2013. The initial schedule for the fieldwork also deliberately allows breaks between the days spent at the place. This is done to escape monotony, and to keep the impression about the place fresh on each day of fieldwork (Collier & Collier, 1986). During each of the seven days, fieldwork lasted from 7 am until at least 7 pm. The approximate time span of 12 hours is an optimal time for fieldwork, because it gives the opportunity to stay on site long enough with considerable focus maintained, and at the same time allows time for regeneration before the next day of the fieldwork.

#### 4.2.2 Methods of Data Collection

Data about sense of place is recorded with notes and photographs. Both methods of data recording align with the heuristic methodology, implemented in this study. In the following section 4.2.2.1 Notes, I state the benefits of using this method to record data during fieldwork, specify what was recorded when, and what instruments were used. Next, in section 4.2.2.2 Photographs, I review the benefits of recording data with photographs, identify the focus of photography, when photos were taken and what instruments were used.

#### 4.2.2.1 Notes

Notes in this research are the first-hand descriptions of the data about sense of place. The sense of place in this study is the sum of my perceptions of the physical space, including my reactions to it and emotions. To gather the data, I record notes about the elements of my experience that I elucidate during the third step of the heuristic process of focusing, as described in the section 4.2.1 Data Collection Procedure. To be able to record elucidated elements of experience, I refer to my internal frame of reference, as a person experiencing the place. According to Moustakas (1990), only the person, who personally experienced a certain process, can provide valid information about this experience.

Recorded notes consist of textual notes and sketches. The qualitative methodology strongly recommends the recording of field notes. Patton (2002) stresses, “what is not optional [in qualitative research] is the taking of field notes” (p. 302) and also mentions, that if notes are not taken, the researcher’s presence on site loses much of its value. Textual notes are the primarily data in this research. During the data analysis, textual notes are analysed to identify major characteristics of place as perceived through the personal experience. Sketches, as well as photographs, which are described as a second method of data collection in section 4.2.2.2

Photographs are supplementary data, which complements textual notes with visual documentation.

Notes about sense of place were recorded according to the open-ended plan. The plan affords organisation of the data and facilitates its further processing during the analysis process, but has open-ended character due to the discovery-oriented type of the fieldwork. The plan is developed based on the focus of fieldwork, identified in the section 4.2.1 Data Collection Procedure and with consideration of the heuristic methodological approach. During the fieldwork, I focus on my perceptions of all possible components of a physical space, including natural elements and human-made objects, weather, flora and fauna. My reactions to everything that is found at the place, emotions, evoked by these, are also in focus. An open-ended plan for taking textual notes includes the following topics:

1. What do I see? What does the landscape look like? What kind of human-made objects can I see?
2. What do I hear?
3. What do I smell?
4. What do I feel/touch?
5. What taste do I experience?
6. What is the fauna of the place?
7. What is the weather like?
8. Other information, that may aid to establish sense of place: own feelings, thoughts, inspirations, descriptions, sketches, etc.

Since the notes record personal experience, all descriptions are given according to my knowledge and understanding. For example, I might see a bird, but not know its proper name. Thus, I might describe it as I see it: “a big white bird with a red crooked beak”. This is the record of the world as I see it, my sense of place, so I am free to describe the place and my perceptions in the way I can. The numeration of the points of plan is conditional. The reactions may be described in any order, because the major task is to perceive and describe the place as it unfolds itself to my perceptions and reactions. This position is consistent with heuristic methodology, where the researcher accepts any dimensions of the researched phenomenon and considers the full scope of reactions to these (Moustakas, 1990).

To keep the fieldwork organized, I take notes in the beginning of each hour for no longer than ten minutes in order to allow time for establishing the personal experience of being at the place. Also, notes may be taken at any other time, if I believe that a certain thought or feeling, which relates to my sense of place, emerged in my consciousness and should be recorded. This is also in agreement with strategies of qualitative study, where “the basic rule of thumb is to write promptly” (Patton, 2002, p. 306). The field notes are taken using a notebook and a pen as affordable instruments.

#### 4.2.2.2 Photographs

Photographic data is collected during fieldwork to supplement textual notes with visual documentation. The use of photography brings a number of advantages to the data collection process. Firstly, photographs precisely capture the setting of fieldwork (Collier & Collier, 1986; Liebenberg, 2009). Secondly, photographs may facilitate better understanding of textual notes during the analysis, as photos supplement what was described in text with



visuals (Patton, 2002; Liebenberg, 2009). Thirdly, photography partially solves the problem of fatigue and loss of focus during fieldwork, because the technical qualities of photographs remain same, whether it is at the beginning or the end of fieldwork (Collier & Collier, 1986).

The overall focus of photography is identified in agreement with the initial focus of fieldwork, so that the photographic data corresponds and complements the data of notes. The objective of the data collection procedure is to collect data about my sense of place. The initial focus of fieldwork is on perceptions of a physical space including all its components. The focus also includes my reactions to these perceptions and emotions evoked by these. Since it is problematic to take a photo of my perceptions, I take photographs of physical space and its elements that appeal to my perceptions, feelings, and emotions. It was expected that the photographs of physical elements, that are found appealing during fieldwork, would be able to recall memories about these feelings during the analysis. Photographs are taken at any time during fieldwork. To take photographs, a camera was used that provides a sufficient quality of photographs in order to serve as a reminder note.

#### 4.3 Methods of Data Analysis

The research process enters into the process of data analysis after a pause, taken for incubation. During incubation stage of the research, data is set aside for a while to allow my awareness of the overall experience of being at the sampled place to emerge and form. The overall process of data analysis includes two stages, which belong to the illumination and explication phases of the heuristic inquiry process, as described in Chapter 4: Research Design.

The first stage belongs to the illumination phase and analyses data about the sense of place, which was recorded with field notes and photographs. During this stage of data analysis, the data is analysed in order to obtain characteristics of the place from the sense of place, which was formed during the process of personal discovery. These characteristics are obtained by analysing the data using steps of heuristic analysis. The heuristic analysis is completed with creative synthesis, when the characteristics of the place are creatively synthesised into personality traits, using anthropomorphism. The second stage of data analysis belongs to the explication phase of the research. In this stage, the identified personality traits are matched to physiognomic descriptions in order to identify corresponding facial features, which are to be creatively synthesised into an image of a human face during the following phase. The following two sections specify the processes and methods that were implemented in each stage of data analysis.

#### 4.3.1 Data Analysis: Stage One

During the first stage of data analysis, the data collected on sense of place is analysed in order to obtain characteristics of the place. These are then interpreted as personality traits, which are needed for the subsequent process of creating the face to portray the place. The data contains the records about sense of place and includes notes and photographs. Notes consist of textual notes and sketches. The primary data, which is analysed during this stage of data analysis, is data of textual notes. Sketches and photographs are supplementary visual data. The supplementary visual data serves as reminder notes a reminder note and facilitates better understanding of the original experience, recorded with textual notes. The process of analysis in this stage is built according to the sequence of procedures of heuristic data analysis, as suggested by Moustakas (1990) and described in Patton (2002). The procedure of heuristic

data analysis is designed with the aim to achieve elucidation of “the essence of the experience of the phenomenon” (Patton, 2002, pp. 486-487). This reflects the purpose of this stage of data analysis for this research. The procedures of heuristic analysis, as implemented in this study, are specified further in the following paragraphs.

Heuristic analysis, as implemented for this study, consists of five steps, or processes: immersion, incubation, illumination, explication, and creative synthesis. During immersion, I repeatedly review the data of textual notes, complemented with sketches and photographs in order to achieve confident knowledge of the data. This confident knowledge is reached at the moment when I achieve inner awareness that the core patterns which characterise the place begin to emerge. I base my confidence on my inner awareness and intuition; the data manifests my sense of place, therefore I may understand the moment when confident knowledge of data is achieved. Despite the fact that notes are taken according to the initial plan with certain sequence of focusing points, during analysis notes are treated as a single textual document. This is done to allow characteristics of the place as understood through sense of place and recoded with data to emerge in an unconstrained way. This aligns with the heuristic approach, where dimensions of phenomenon of the research interest emerge in an unconstrained way (Moustakas, 1990).

The process of immersion is followed by incubation. Incubation is the step when data is set aside for some time. Patton (2002) describes this time as an indefinite time for “quiet contemplation” when the inquirer waits for clear awareness of the researched experience to emerge in the researcher’s consciousness. Moustakas (1990) suggests that this is also time for the researcher to withdraw from the data in order to return to it later with “fresh energy and perspective” (p. 51). During the incubation stage of this data analysis process, I put the data

aside for two weeks. This period of time appears suitable within this research, due to the restricted timeframe of one year to complete this thesis.

During the following step, illumination, the structure of the experience is revealed in order to obtain its essential parameters (Patton, 2002). Thus, during the process of illumination, I return to the data by reading textual notes again and identifying the textual descriptions which describe the core characteristics of my sense of place. The choice of core characteristics is made based on my tacit knowledge, intuition, and internal frame of reference. As the result of this process, the data of textual notes is revised, and textual excerpts that refer to the core characteristics of sense of place are selected (underlined). Sketches and photographs supporting the selected textual excerpts are identified based on my personal knowledge of the experience.

During the next step of explication, I return to the textual excerpts and relevant sketches and photographs. I revise underlined textual excerpts in order to find similarities which may signify core characteristics of place, as understood through the sense of place built through the experience of being at the place. This is done in accordance with the procedure of analysis of qualitative heuristics, which aims to discover similarities in data and overcome differences (Kleining & Witt, as cited in Patton, 2002). Furthermore, the textual excerpts are divided into groups. Each group contains the textual excerpts, which describe a similar dimension of my sense of place. I then make a statement, which describes the primary theme for each group. Each statement signifies a single characteristic of the place.

The following process, creative synthesis, is the way to express, portray, or communicate findings (Moustakas, 1990; Patton, 2002). The findings of this data analysis are statements,

which are characteristics of the place, extracted from the collected data about sense of place. The creative synthesis may take various creative forms, depending on the researcher's personal understanding of the results. For example, it may be a drawing or a poem. In this particular case, the creative synthesis was made according to the ultimate aim to embody the sense of place in an image of the human face. The face is created on the basis of facial traits, obtained from a physiognomic approach. The physiognomic approach (Tickle, 2011) provides information about facial traits and personality traits, where each facial trait is related to a specific personality trait. Thus, in order to obtain facial traits to create a face, the research requires personality traits that are characteristic of the place. This may be done by interpreting each of the identified characteristics of the place in an anthropomorphic manner.

Creative synthesis in this analysis is performed through the application of the anthropomorphic framework, as identified in section 2.3 Anthropomorphism of the literature review. In its essence the framework is a synthesis of approaches described by Epley et al. (2007) and Persson et al. (2000). It involves reasoning about nonhuman entities based on one's knowledge of human nature and summarizes these impressions by assigning familiar human personality traits to those entities. During creative synthesis, I interpret each characteristic of the place as a human personality trait. I do it by referring to my knowledge of possible human personality traits and their qualities. When choosing personality traits from my personal vocabulary, I also consider my tacit knowledge of the place. This allows me to choose the personality traits, which appropriately match the characteristics of the place, as they are portrayed in the data. As the overall result of the first stage of data analysis, a number of personality traits, which portray the main characteristics of place, are obtained.

#### 4.3.2 Data Analysis: Stage Two

In this stage, personality traits, identified in the previous stage of the analysis, are matched to physiognomic descriptions in order to identify corresponding facial features. Physiognomy is the theory, which assumes that personality traits could be identified by the assessment of appearance, especially the face (Rutkowska, 2010; Tickle, 2011). Normally physiognomy interprets personality traits based on facial traits. In this research, the theory of physiognomy is applied in a reverse way. In order to identify facial traits that match to the previously identified personality traits, these personality traits are compared to the character traits which are described by Tickle (2011) and can be found summarized in Table 1 in section 2.5 Physiognomy.

I take the decision about whether each personality trait, identified in the previous stage, matches to a certain personality trait, described in Tickle (2011), relying on intuition and knowledge about human characters. As the result of the second stage of data analysis, facial traits, corresponding to the personality traits, which were identified from the collected data, are obtained. For creating a human face, a digital copy of illustrations of each identified facial traits is saved in a separate folder. Thus, facial traits are prepared to be creatively synthesised in the subsequent phase of the research.

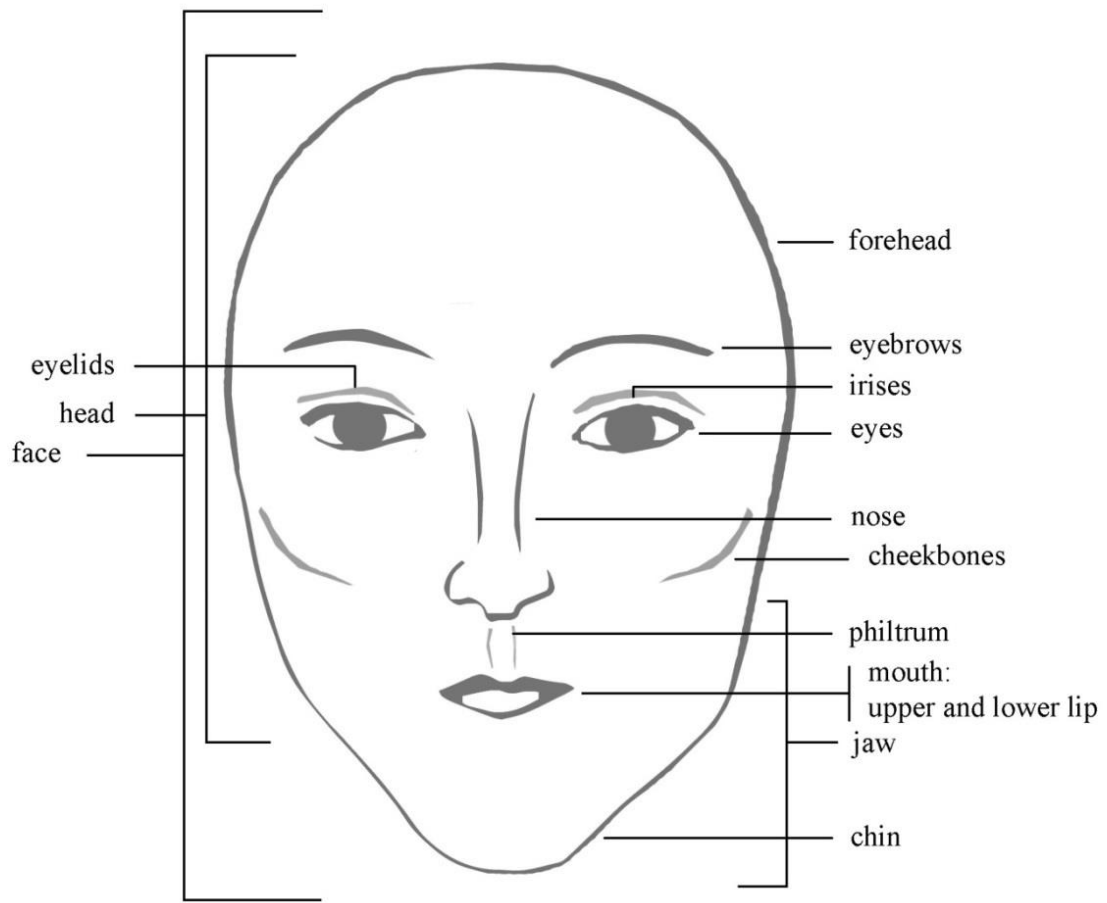
#### 4.4 Creative Synthesis: Description of the Procedure

Creative synthesis is the concluding stage of this research. According to Moustakas (1990) “creative synthesis . . . portrays the essential qualities and meanings of an experience” (p. 25). At this stage, the practical work is undertaken in order to synthesise facial traits, obtained

from the previously described data analysis, into an image of the human face. The image created in this phase is the result of the implemented approach, which this study seeks to explore. Facial traits, obtained as the result of the data analysis are combined to create a face according to the process described below.

In the physiognomic approach, employed in this study (Tickle, 2011) each of personality traits is assigned to a specific facial trait. Each facial trait is illustrated. Based on the assumption that illustrations, which display facial traits in a book, dedicated to physiognomy, show each trait with sufficient accuracy, I accept these images as the reference in the process of creating face using obtained facial traits.

Figure 32 includes all types of facial features in physiognomic descriptions provided by Tickle (2011) (Table 1), and that can be used to create face during the phase of creative synthesis. The face is shown from the front, because this is the best angle to see and evaluate the face (Rosetree, 2001). The ability to evaluate the face is important in this research because the approach explored in the study is partially evaluated through the assessment of the resulting face. The assessment includes my reflection on an image of the face, which is intended to portray my sense of place.



*Figure 32.* The template of image of face, which includes types of facial traits, considered for creating an image of the human face based on the data of sense of place



The creative synthesis is executed in four basic steps, starting from creating a digital image of face, which serves as reference for the final hand drawn image. I explain the process on an example. Assume that following personality traits are identified and the face should be created to display these personality traits: ‘low tolerance’, ‘low analytical’, ‘inquisitive’, ‘appreciation for design’, ‘high self-confidence’ and ‘verbose’. All these personality traits are described in Tickle (2011) and matched to the facial features.

In the first step of creative synthesis, I bring together the illustrations of facial traits, which match the given personality traits (Figure 33). For the feature ‘low tolerance’ the corresponding facial trait are narrow set eyes, where narrowness is characterised by the space between eyes being less than the width of one eye (Tickle, 2011). For ‘low analytical’ the facial trait is ‘exposed eyelids’, which are fully seen as opposed to eyelids where the skin of the eyelid is folded and therefore unseen (Tickle, 2011). An ‘inquisitive’ character is identified by a so-called ‘bulbous nose’ (Tickle, 2011, p. 69). Eyebrows that look like an inverted V are characteristic for a personality with ‘appreciation for design’ (Tickle, 2011). A wide face is characteristic for the trait ‘high self-confidence’. The width of the face is evaluated by comparing the width of face, measured from the outer edge of one eyebrow to the outer edge of the other, with its length, measured from the chin to the outer edge of the forehead (Tickle, 2011). The personality trait ‘verbose’ is characteristic of a person with a full upper lip (Tickle, 2011). Graphic software is used to bring the identified facial features into a single visual space.

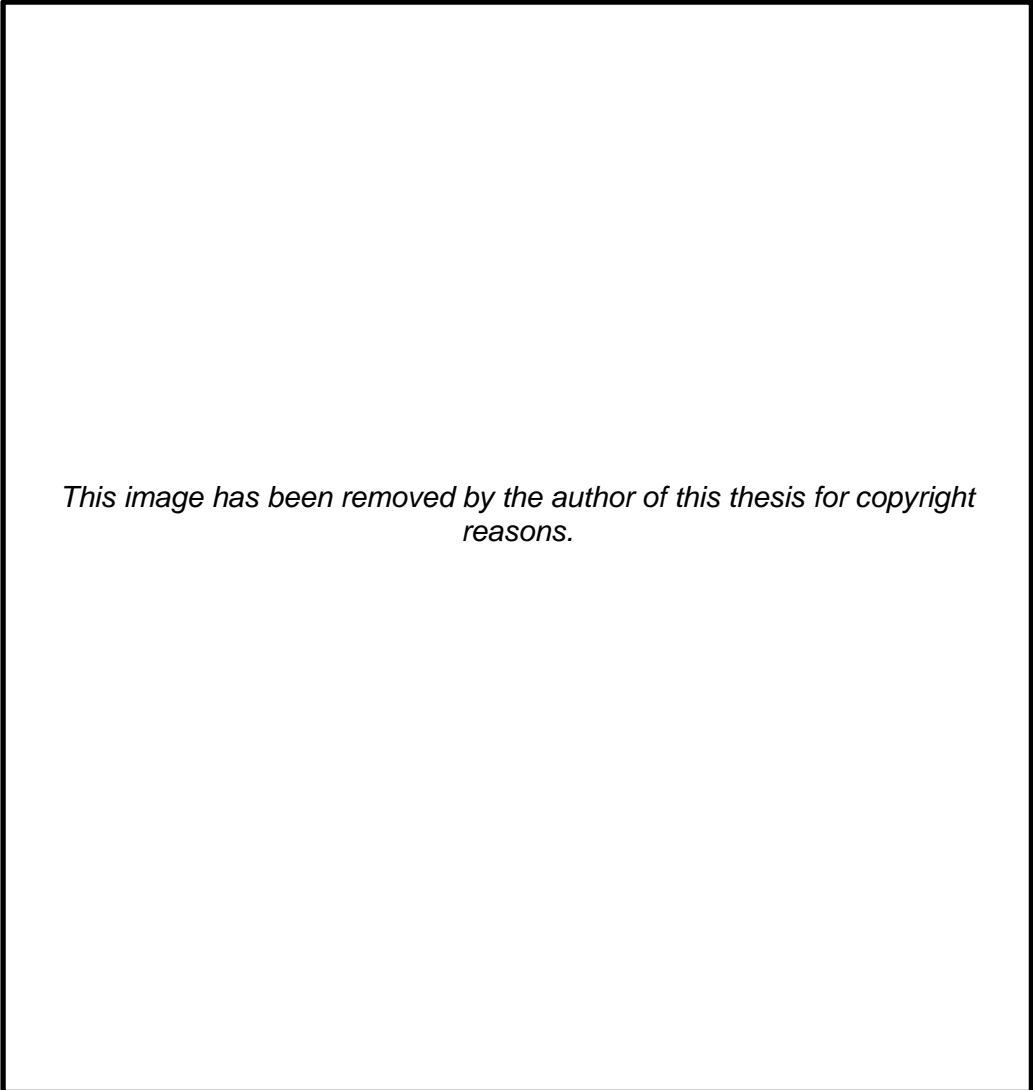
If several variations of a similar trait are obtained, these are merged to acquire a trait that contained features of both. This was made in accordance with Tickle (2011), who suggests that each particular person has only a degree of each trait, and also can have degree of

absolutely opposite traits. If there were no facial features that defined facial proportions, the proportions are kept as average according to the my understanding and information given by Tickle (2011).

*This image has been removed by the author of this thesis for copyright reasons.*

*Figure 33.* Illustrations of facial traits characteristic of the exemplified personality traits: ‘low tolerance’ (1), ‘low analytical’ (2), ‘inquisitive’ (3), ‘appreciation for design’ (4), ‘high self-confidence’ (5) and ‘verbose’ (6) (Tickle, 2011, pp. 23, 37, 69, 81, 97, 183)

During the second step of creative synthesis process, everything but the required trait is erased from each illustration and facial traits are composed in a single image (Figure 34). Many of the images of facial traits provided by Tickle show a facial trait along with other facial features. For example, a picture of the face shown in Figure 33 (#5) is supposed to illustrate a wide face, but also includes superfluous visual information by also rendering the eyes and nose. In the process of merging the given facial traits into one face, I am guided by intuition and tacit understanding of how a face with given traits might look like. This helps me to propose how diverse facial traits can be put together in the image of one face. The composed image (Figure 35) of the face serves as a prototype or a reference for creating a hand drawn image of the face.



*This image has been removed by the author of this thesis for copyright reasons.*

*Figure 34.* During the second step of creative synthesis process, everything but the required trait is erased from each illustration and facial traits are composed in a single image. The process is achieved and demonstrated using illustrations, displayed in Tickle

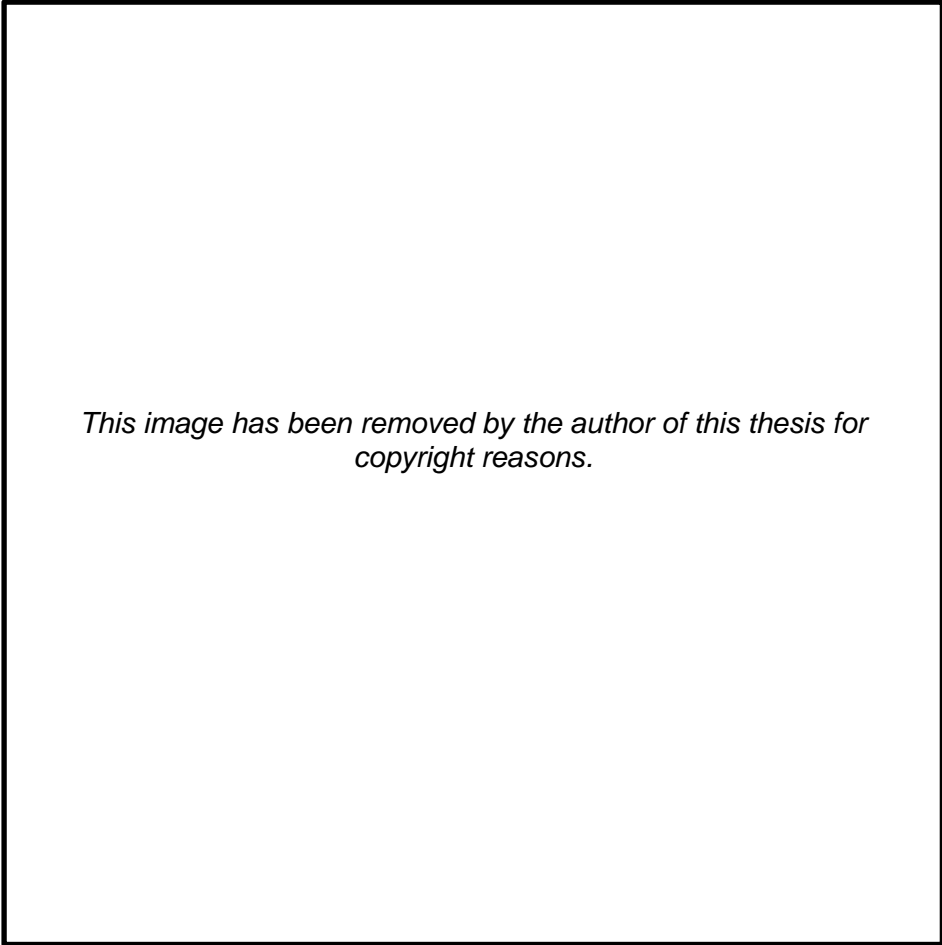


*Figure 35.* The composed image of the face serves as an identikit, or a reference for creating a hand drawn image of the face. The reference image is created using illustrations, displayed in Tickle (2011, pp. 23, 37, 69, 81, 97, 183)

During the third step, the obtained image is printed with an opacity value of 50%. This is done because the obtained image serves as a reference for the proportions and facial features of a hand drawn face. As the final step, an image of the face is sketched by hand using a pencil. Throughout the drawing process, I am guided by the illustrations of facial traits, as well as by my process of intuiting the whole face based on the identified facial traits. As a result, an image of the human face, which is ultimately intended to portray the sense of place, is created.

## Chapter 5: Process of Data Collection and Data

The data was collected at Piha over seven days in 2013: October 9, 13 and November 2, 4, 7, 12, and 22. Each day of fieldwork lasted from about 7 am until approximately 7 pm. I collected notes and photographs with the objective to capture my sense of place, which grew through the personal contact with the location. The aim was to let my sense of place grow in an unconstrained way. Thus, the initial focus of the fieldwork in regard to the spatial position was loosely specified and then defined more precisely during the process (Figure 11). My sense of place, as it was established over the period of the personal discovery at Piha, is located around the Lion Rock with the Lion Rock in its centre. One of the sketches demonstrates the central place of Lion Rock in the focus of fieldwork (Figure 37). The focus signifies the area where the data was recorded.



*This image has been removed by the author of this thesis for copyright reasons.*

*Figure 36.* The focus of fieldwork: the centre of focus coincides with a feature of the local landscape, Lion Rock. It is marked with the small red circle. The medium circle shows the focus of fieldwork, the large ellipse estimates the boundaries of fieldwork ("Wises Maps", n.d)



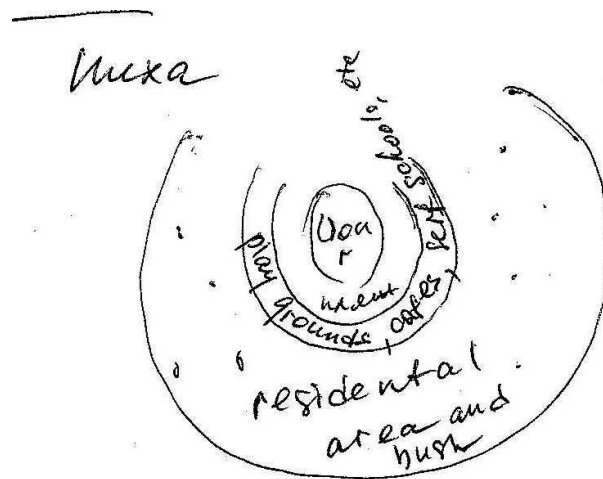


Figure 37. Sketch, made during the fieldwork on November 07, 2013; Lion Rock is in the middle, surrounded, first, by beach, then "playground, cafes, surf school, etc.", then "residential area and bush"

According to my sense of place, Lion Rock plays an important role in the identity of Piha as a place (Figures 37, 39). Even when I moved away from Lion Rock, it followed me (Figure 40). As fieldwork revealed, there is also a historical fact, which corresponds to my perception of Lion Rock as the heart of place. In fact, the original name of Lion Rock was the Maori name Te Piha, which subsequently became the name of the whole surrounding area.

According to information that is placed on the rock by the Auckland Regional Council,

Lion Rock was traditionally known as Te Piha. It was named after the wave patterns, which resembled the bow wave from a canoe, created by the rock. Lion Rock was a defensive pa known as Whakaari (Landmark) (Figure 38)

Later in history, the rock obtained its current name, Lion Rock, for its resemblance to the shape of a lion's head when being looked at from either side of the beach.

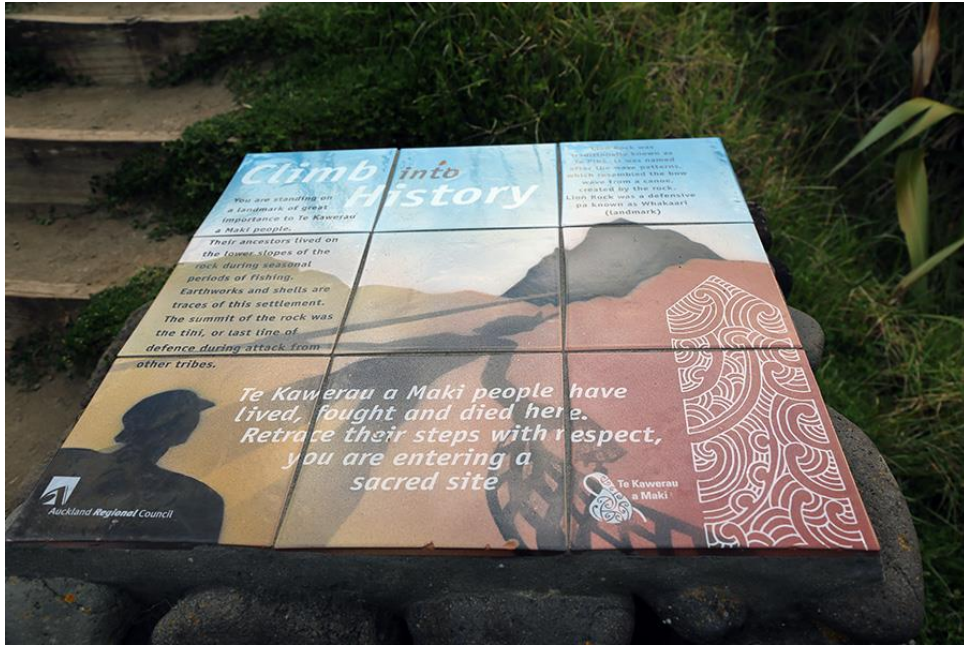


Figure 38. An informational sign, found on Lion Rock. Photograph taken during fieldwork on October 13, 2013



Figure 39. The view of Lion Rock from the side of the mainland; the picture is taken during fieldwork on October 13, 2013



*Figure 40.* Photograph of Lion Rock from the distance taken during fieldwork on November 12, 2013



*Figure 41.* The sketch of landscape of Piha. Sketch is made during the fieldwork on November 2, 2013

Notes consisted of textual notes and sketches. The time-schedule for taking notes was kept as planned. I recorded notes at the beginning of each hour for no longer than ten minutes.

Textual notes were made in accordance with the open-ended plan for taking textual notes, however, the original sequence of focusing points mentioned in the plan was not followed. Changes to the sequence were allowed for according to the methods of the study as the plan for the recording of textual notes was preliminary. Thus, only during the first days of fieldwork textual notes were recorded according to the structure of the original open-ended plan, described in 4.2.2.1 Notes. Subsequently, records were made primarily based on what appealed to my attention. This did not impede the process of analysing the data of textual notes, described in 4.3.1 Data Analysis: Stage One, because the textual notes were treated as a single document during the analysis. Being emotionally engaged with Piha and the process of fieldwork, I sometimes used my native Russian language to record my impressions. My native language allowed me to make the most precise record of own feelings and reactions to the place and, ultimately, achieve the goal of fieldwork to collect the data that describes my sense of Piha. An example of field notes, taken during one day of fieldwork, October 13, 2013, may be found in Appendix A.

Sketches were made to complement the notes. I found sketches, even those that were made in the simplest way, a very useful way to record impressions about the place in a concise and meaningful manner. For example, the outline of slopes that can be seen on one of the sketches (Figure 42), visually summarises and adds depth of meaning to the following textual record:

Although settled and tamed, Piha . . . reminds [about] prehistoric time  
as it seen on pictures . . . from books. Rocks and hills с очень  
крутыми склонами [with very steep slopes]: [sketch: Figure 42]

покрытые густой растительностью и папоротниками, гигантские цветы экзотические, что растут вдоль дороги [covered with dense greenery and ferns, giant exotic flowers that casually grow alongside the road] (Excerpt from textual notes, taken on November 12, 2013).

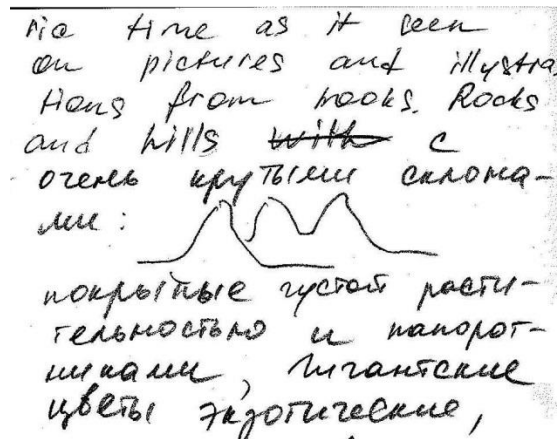
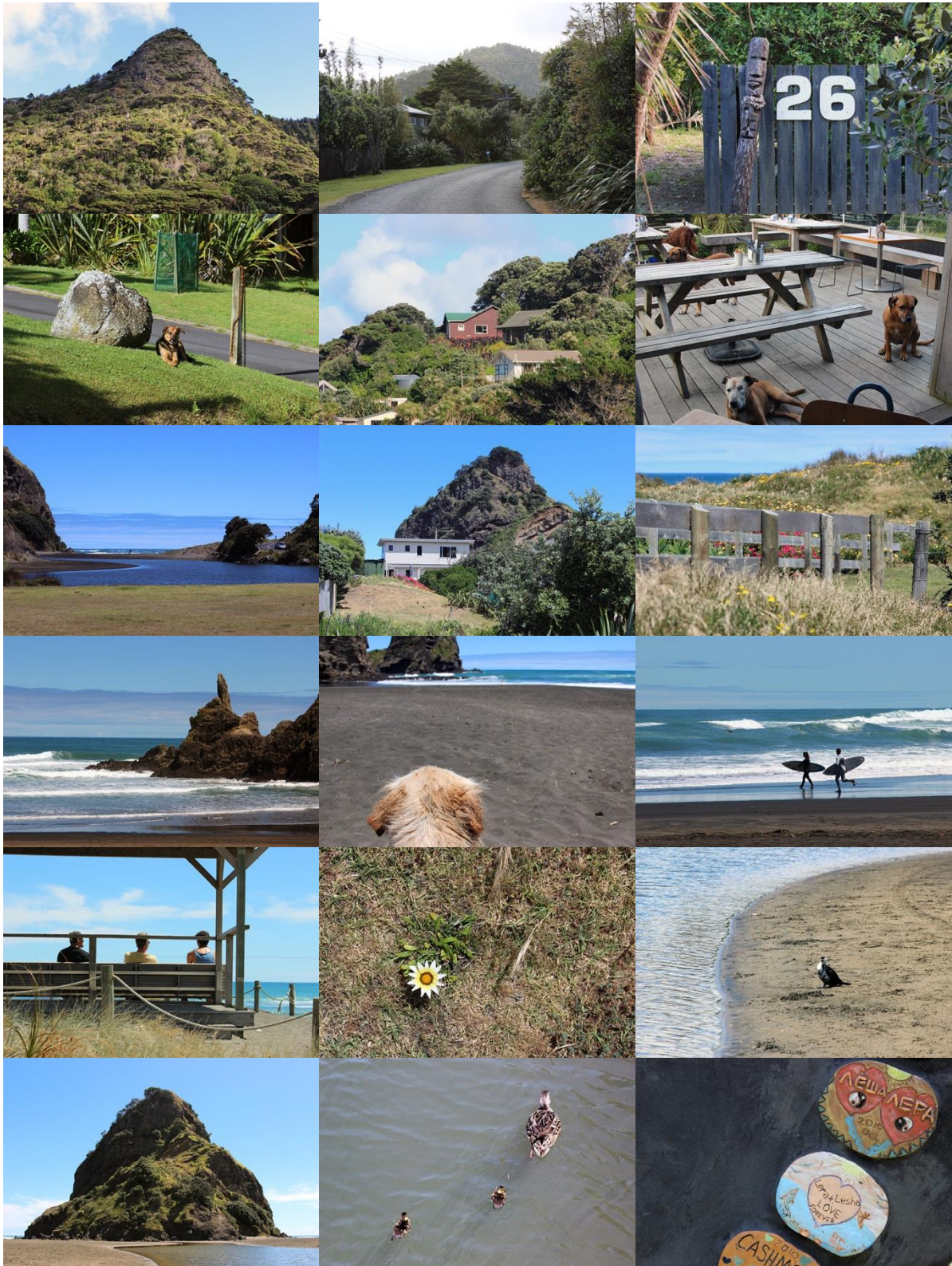
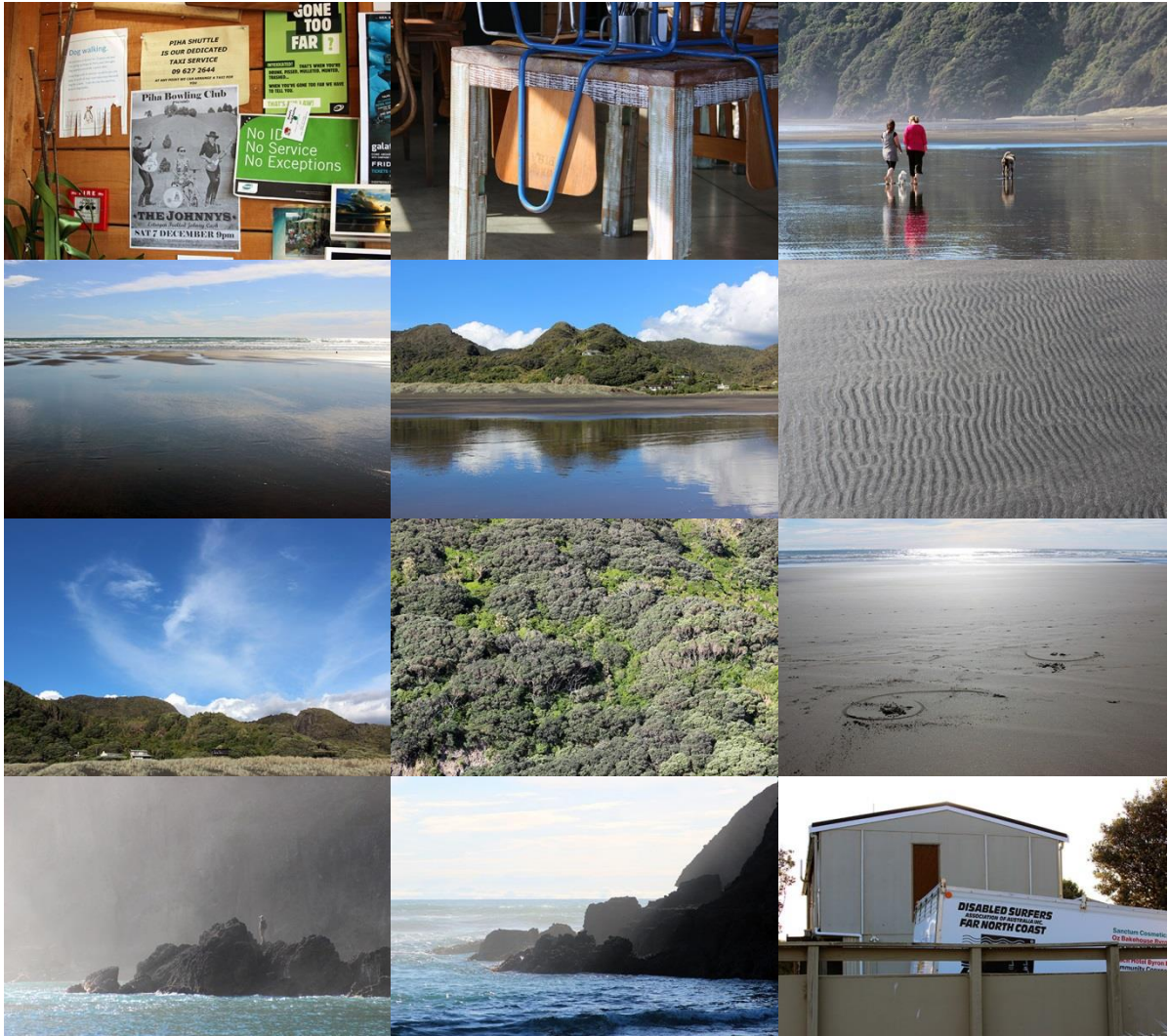


Figure 42. Sketch, made during fieldwork on November 12, 2013: “Rocks and hills with very steep slopes”

In order to support textual notes with visual documentation, a large number of photographs was taken during the fieldwork. Photographs were taken without preliminary focus. Any detail or feature of Piha that extensively appealed to my perceptions and emotions was photographed (Figure 43). An extract of photographic data collected during fieldwork on October 13, 2013 is recorded on DVD, attached to this manuscript (Appendix B).

Figure 43. Examples of photographs, taken during the single day of fieldwork, November 4, 2013





## Chapter 6: Data Analysis

The following sections outline the process of first and second stages of data analysis. Each undertaken step is provided with an example. The results of data analysis are displayed in each section.

### 6.1 Data Analysis: Stage One

The first stage of data analysis belongs to the Illumination stage of this research. The data of textual notes, sketches, and photographs was analysed according to the five steps of heuristic data analysis, outlined in section 4.3.1 Data Analysis: Stage One: immersion, incubation, illumination, explication, and creative synthesis. As the result of the first four steps, the main characteristics of Piha according to my sense of the place were identified from the data. Creative synthesis then takes these characteristics and interprets them as personality traits.

The analysis was structured with the aim to process the textual notes, as the primary source of data. The role of photographs and sketches was to complement textual data with visual documentation. During the step of *immersion*, I repeatedly reviewed the data, read notes and revised photos, in order to become fully familiar with the data. Textual notes were treated as a single textual document, as opposed to analysing the data in clusters according to subheadings, such as “What sounds do I hear?” This allowed me to recognise meaningful characteristics of the place by relying on my tacit knowledge of Piha and my intuition.

When I reached an understanding that certain patterns in the data pointed towards the characteristics of place, which I sought to find, the process of analysis entered its second step,



*incubation*. During the process of incubation, the data was set aside for about two weeks, in order to allow me to return to it with new energy and a fresh perspective. The period away from the data allowed me to recognise, which features of the place are of primary importance and which are secondary. In this process, I was assisted by my experience of the personal contact with Piha, and tacit knowledge of the place that I grew during the contact.

During the following step of *illumination*, I reviewed the data of textual notes again and identified the textual descriptions which provided the important characteristics of Piha according to my sense of place. I also revised the data of sketches and photographs in order to complement textual excerpts with the relevant visual data. Sketches were made within textual notes, therefore, the data of sketches was naturally aligned to corresponding textual notes (Figure 42). Photographs were arranged according to the sequence of information in the textual notes, and paired with relevant textual descriptions. Figures 44 and 45 provide examples.

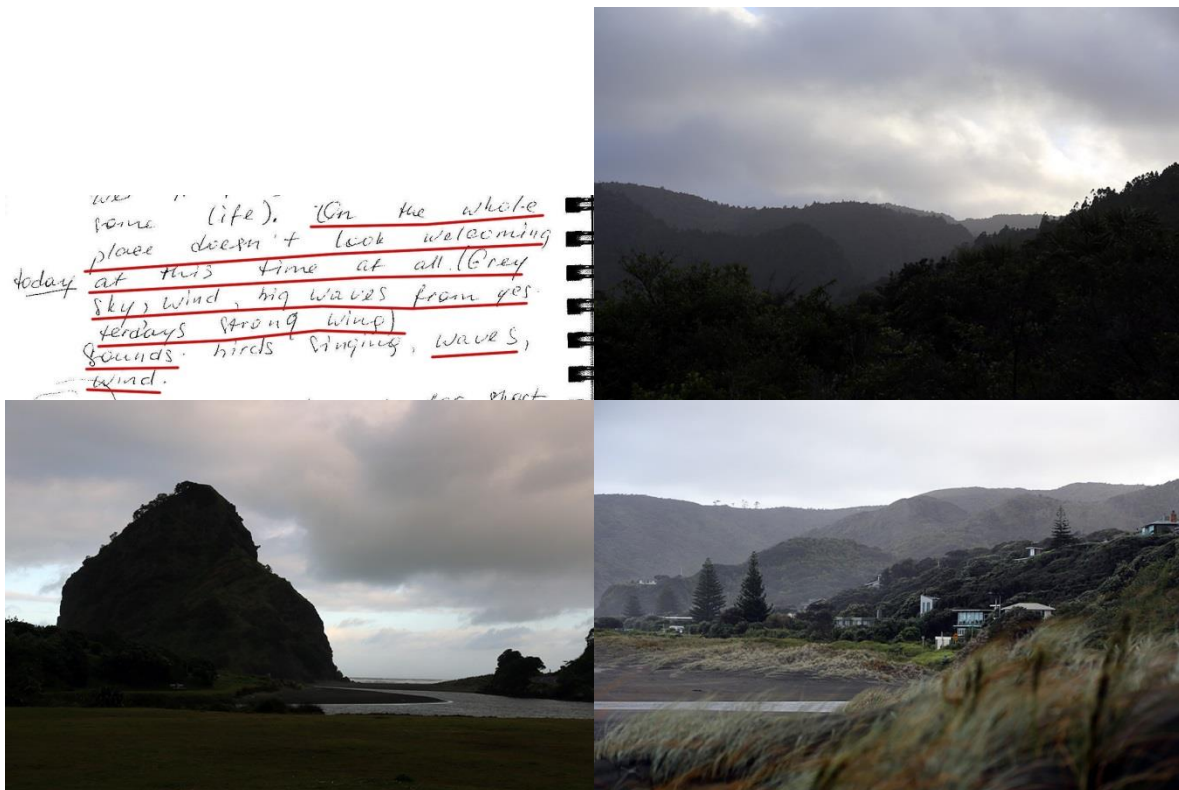


Figure 44. Excerpt from the textual notes taken during the fieldwork on the October 13, 2013, complemented with photographs. The text states: “. . . place doesn’t look welcoming at this time at all (Gr[a]y sky, wind, big waves . . .) Sounds [of] waves, wind”

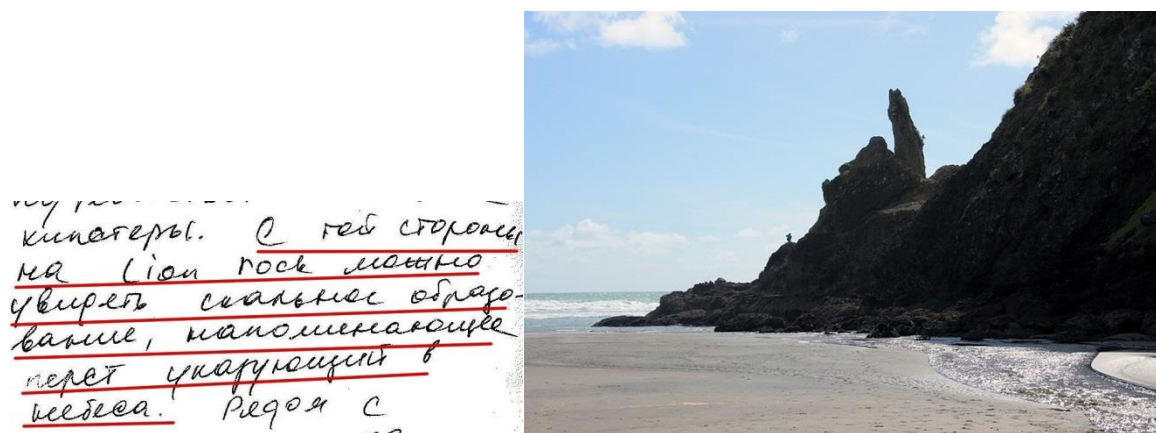








Figure 45. Excerpt from notes taken during fieldwork on the November 2, 2013, complemented with photographs. The text states: “From that side, one can spot the rock formation, which resembles a finger that points at the sky” [“С той стороны на Lion Rock можно увидеть скальное образование, напоминающее перст [,] указующий в небеса”]

During the following step of *explication*, I revised the selected textual excerpts that identify important characteristics of Piha according to my sense of the place. I searched for similarities among those characteristics in order to identify the most significant ones. I identified similarities according to my understanding of my sense of Piha as a place. As the result, the excerpts of the data were divided into groups, which indicated the same characteristic of Piha. Following, I provided each group of excerpts with a single statement to describe the major characteristic of Piha that was identified from the information contained in this group. Table 2 provides an example, in which data excerpts are grouped and provided with the single statement.

**Table 2.** *Example of grouped data excerpts and the single statement, provided to characterise the data contained in excerpts*

A single statement, describing the major characteristic of Piha based on the information, provided by data excerpts, included in the group: “Majestic, but can be dangerous”		
The date	Examples of the data excerpts, included in the group	
	Excerpt from the textual data	Photographs that supplement textual excerpts
13/10/13	<p>“Sun [came] out for [the] short time and [Piha] became different . . . and not scary. Because when [the weather] is grey[,] the local landscape looks somewhat threatening. It looks like the forces of nature are about to take over”</p>	

13/10/13	Piha is “wildly beautiful and wildly scary”	
02/11/13	“the signs on the beach advise about possible danger: ‘swimming is prohibited’ because of danger, sign on the rock warns about unstable cliffs”	 
02/11/13	“Windy and dark (cloudy) and together with noisy waves and dramatic landscape it was giving impression of . . . scary world where nothing I can do to protect myself [from] forces of nature. This place is so powerful and wild”	

07/11/13	<p>“Rain began. People are leaving beach. Only one surfer stayed in water. He looks so tiny compared to the ocean and waves that it is scary, if he will be ok and safe. Now I lost the view of him again”</p>	
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The last step of the first stage of data analysis is *creative synthesis*. This step involves interpreting each of the statements about the major characteristics of Piha as a personality trait. For this purpose, I applied the anthropomorphic framework, which is described in sections 2.3 Anthropomorphism and 4.3.1 Data Analysis: Stage One. In each case, I chose a personality trait that, in my view, corresponds to the description of the major characteristic of the place, relying on my knowledge of human characters and possible personality traits. To ensure that chosen personality traits accurately correspond to the major characteristics of Piha, I relied on intuition, my personal experience of being at Piha and tacit knowledge about the place. Table 3 contains all major characteristics of Piha according to my perception, as well as the personality traits, which, in my view, correlate to these characteristics. Some of the major characteristics were brought together to be assigned with a single personality trait. For example, characteristics “location has a difficult access” and “people, who live here, refer to themselves as a ‘local community’” were grouped together and assigned with the personality trait “not open for everyone, reserved personality”.

**Table 3.** *Major characteristics of Piha correlated with personality traits*

<i>Major characteristic of Piha</i>	<i>Personality trait</i>
Very suitable and popular for active time spending: hiking, surfing	Active
Nature and natural materials (wood) prevail in human-made objects	Straightforward, sincere
Although this place is the nature itself, this nature is artificially improved by humans: in some aspects made more convenient, in others – more beautiful; Successful combination of the nature and technologies; ART is appreciated	Aesthete, fond of balance
Piha has status of a “special place to visit”	Charismatic
Has a ‘sister’, Karakere beach; Many families with kids are visiting Piha for “family time”	Family oriented
Nature at its best	Fond of nature
Signs of volcanic origin of the local landscape; in a very distant past, was a place of battles	Tough, had turbulent past
Any detail of architecture is lost on the background of majestic scenery	Has a wide perspective at things

Not seen to a visitor, there are conflicts within the local community	Experiences inner conflicts
Memories about the past are kept in memorial plaques and informational with historical information, found at Piha. Memories about significant deeds of locals are cherished and acknowledged	Keeps memories, respects past
A lot of open space	Loves freedom
Pace of life is free of tight schedule, relaxed atmosphere	Not busy, lives with relaxed schedule
Location has a difficult access; people, who live here, refer to themselves as a 'local community'	Not open for everyone, reserved personality
Space of the place is well-organised: specially designed paths and routs at Piha make it easy to get around	Organised
The environment is well taken care of, in some parts improved by landscape design	Pays attention to how he looks
Piha radiates power: here it becomes obvious that humans can do nothing against natural forces	Powerful personality
Rare natural features; the sense of independency from the 'big' city	Prefers to do things in his own way

Appearance of Piha did not change much over past hundred years; abundance of information that encourages visitors to be careful with local nature	Protective of what he has
The weather dramatically transforms the place from welcoming to threatening, from active to quiet	Radical mood changes
Piha is a good place for romantic rendezvous	Romantic
The nature of Piha is very impressive and gives the impression of strength, which is difficult to resist	Strong-minded
Majestic, but can be dangerous	Terrible in anger, powerful personality



## 6.2 Data Analysis: Stage Two

The second stage of data analysis belongs to the explication phase of the research. This phase involves identifying facial traits and preparing them to be synthesised in a “face of place” in the subsequent creative synthesis. To identify facial traits, I compared the personality traits obtained in the previous stage of analysis (Table 3), with descriptions of personality traits described by Tickle (2011) and summarised in Table 1 found in section 2.5.3 Application of Physiognomy in Practice. The comparison allowed personality traits described by Tickle (2011) in Table 1 to be matched, based on my intuition and tacit knowledge, to the personality traits described in Table 3.

In Tickle (2011), each personality trait is presented with a matching facial trait as a written description and illustration (Table 1). The illustrated descriptions provide a means to easily translate the obtained personality traits into illustrations (Table 4). Digital copies of each illustration of a facial trait were saved in the separate folder on the computer and prepared to be creatively synthesised in an image of the human face in the subsequent phase.

**Table 4.** *The chart of personality traits and corresponding facial traits, resulted after comparison of personality traits, identified as the result on the first stage of data analysis, with descriptions of personality traits*

<i>Personality trait</i>		<i>Facial trait</i>	
<i>Personality trait, identified as the result of first stage of data analysis (Table 3)</i>	<i>The personality trait, as named in Tickle (2011)</i>	<i>The name of the matching facial feature, as described in Tickle (2011)</i>	<i>Illustration of the facial trait (Tickle, 2011)</i>
Keeps memories, respects past	“To conserve”: Tends to preserve and save things in case they will be needed in the future; likes to work with and maintain long-term projects; does not tend to be adventurous (p. 104)	Forehead: round	This image has been removed by the author of this thesis for copyright reasons.  (p. 104)
Family oriented			
Protective of what he has			

Terrible in anger, powerful personality	<p>“Authoritative”: The greater the width of the jaw, the more authoritative the person seems; enjoys the role of being in charge and does not like to have a subordinate role</p> <p>(p. 135)</p>	Jaw: square	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p.135 )</p>
Charismatic			
Strong-minded			
Fond of nature	<p>“Aesthetic appreciation”: The person with this type of brows appreciates the beauty of things; has an innate sense of harmony and balance of things; likes to improve the environment and make it better for everybody</p> <p>(p. 89)</p>	<p>Eyebrows shape: straight underside</p>	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 89)</p>
Aesthete, fond of balance			

<p>Organised</p>	<p>“Mechanical appreciation”: The person with this trait has the ability to assemble components into the whole; has an organised way of thinking and is able to successfully develop an idea of project into a finished job (p. 84)</p>	<p>Eyebrows shape: ‘half-moon’</p>	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 84)</p>
<p>Not open for everyone, reserved personality</p>	<p>“Discriminating”: The person with highly set eyebrows—the space between the top of the eye and the eyebrow is bigger than the height of the eye—likes to keep formality and does not appreciate familiarity (p. 92)</p>	<p>Eyebrows height: high (the space between top of the eye and the brow is equal or more than the height of the eye)</p>	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 92)</p>

Has a wide perspective at things	“High tolerance”: The person with wide eyes	The space between the	
Not busy, lives with relaxed schedule	takes time before responding to the situation; can be considered a relaxed person; focuses on several tasks at once; has a tendency towards multitasking (p. 23)	eyes is greater than the width of one eye	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 23)</p>
Sincere person	“High emotional	Irises size: large	
Romantic	expression”: The person with this trait tends to be very emotional, affectionate and openly shares his/her feelings with others (p. 51)		<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 51)</p>

Prefers to do things in his own way	<p>“Self-reliant”/ “Extremely independent”: The person with “flared nostrils” is very independent in taking decisions, moreover, he/she tends to make decisions for other people; believes that his/her opinion is always right (p. 77)</p>	Flared nostrils	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 77)</p>
Loves freedom			
Strong-minded			
Active	<p>“Restless”: The person with this trait likes to be active and stays in permanent motion; likes to be physically active and is very energetic (p. 147)</p>	<p>Proportion: the long distance from nose to chin</p>	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 147)</p>

<p>Tough, had turbulent past</p>	<p>“Concise”: The person with this trait explains things briefly and clearly; does not like long talks; could have experienced some challenges in live that stimulated development of his/her concise and introverted nature (p. 183)</p>	<p>Upper lip: thin</p>	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 183)</p>
<p>Pays attention to how he looks</p>	<p>“Taking things personally”: The person with this trait pays much attention to his/her appearance; fears to be criticised and takes criticism personally (p. 192)</p>	<p>Philtrum: short</p>	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 192)</p>

Radical mood changes	<p>“Mood swings”: Quantity of asymmetries in one’s face determines the amount of mood changes. The more of asymmetries, the higher the possibility of extreme mood changes. (p. 21)</p>	Face: asymmetrical	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 21)</p>
Experiences inner conflicts			
Strong-minded	<p>“Confident”: Self-confident person, likes to be a leader (p. 97)</p>	Face: wide	<p><i>This image has been removed by the author of this thesis for copyright reasons.</i></p> <p>(p. 97)</p>
Charismatic			
Powerful personality			



## Chapter 7: Creative Synthesis

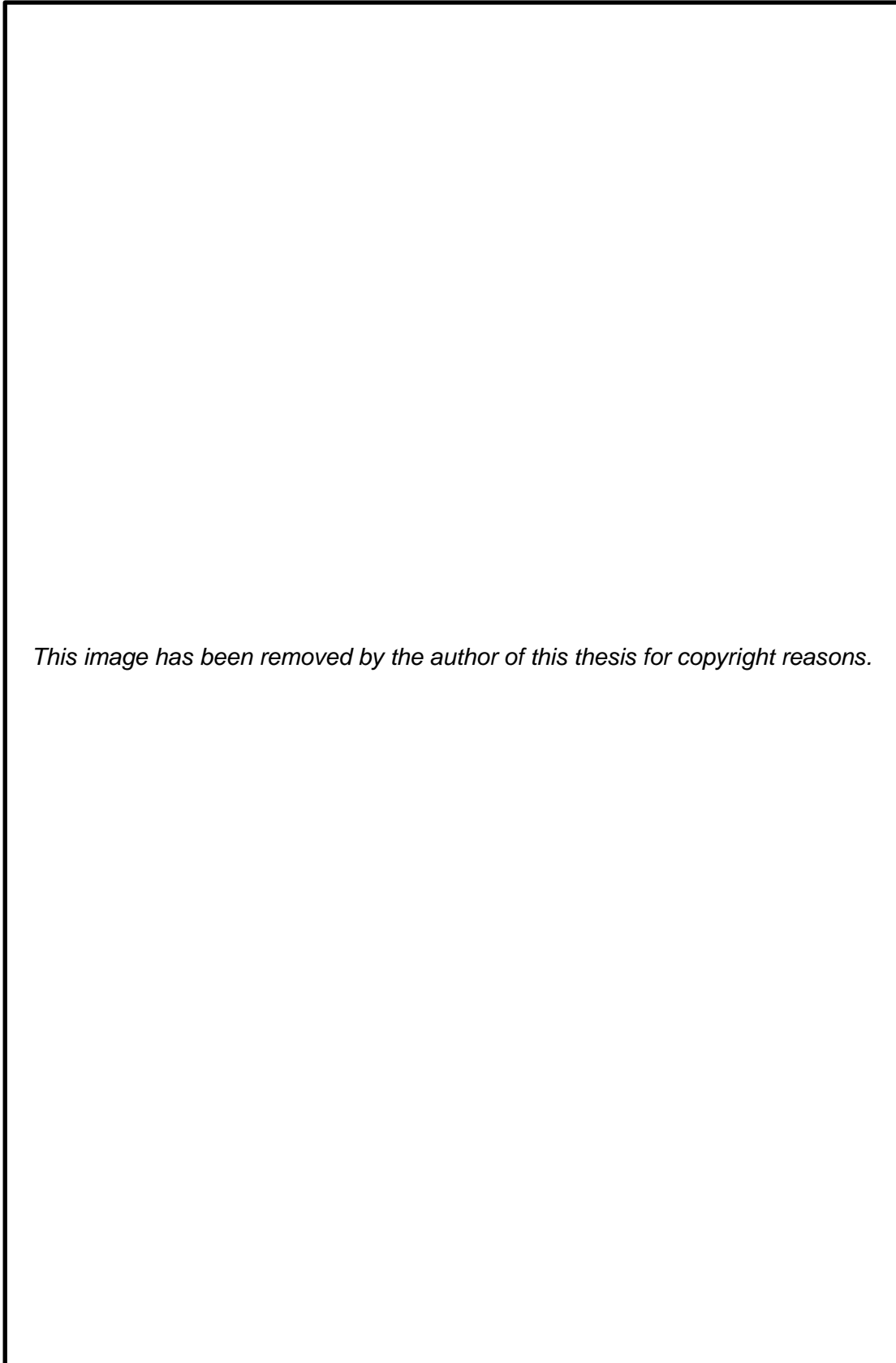
Creative synthesis is the concluding phase of this heuristic research (Figure 27). During the phase of creative synthesis, an image of the human face was created in accordance with the facial traits, which were obtained as the result of the second stage of data analysis (Table 4). I completed the face guided by the steps described in 4.4 Creative Synthesis: Description of the Procedure. First, all illustrations of facial traits (Table 4) were brought to a single visual space using graphic software (Figure 46).

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*Figure 46.* As the first step of creative synthesis, the facial traits, identified during the second stage of data analysis are brought together in a single visual space. **1.** Round forehead matches to the personality trait “to conserve” (Tickle, 2011, p. 104). **2.** Square jaw matches to the personality trait “authoritative” (Tickle, 2011, p. 135). **3.** Eyebrows shape (straight underside) matches to the personality trait “aesthetic appreciation” (Tickle, 2011, p. 89). **4.** Eyebrows shape (‘half-moon’) matches to the personality trait “mechanical appreciation” (Tickle, 2011, p. 84). **5.** Eyebrows height: high (the space between top of the eye and the brow is equal or more than the height of the eye) matches to the personality trait “discriminating” (Tickle, 2011, p. 92). **6.** The space between the eyes greater than the width of one eye is the feature that matches to the personality trait “high tolerance” (Tickle, 2011, p. 23). **7.** Large size of irises matches to the personality trait “high emotional expression” (Tickle, 2011, p. 51). **8.** The facial feature “flared nostrils” matches to the personality trait “self-reliant” (Tickle, 2011, p. 77). **9.** The proportion of face with the long distance from nose to chin matches to the personality trait “restless” (Tickle, 2011, p. 147). **10.** Thin upper lip denotes the personality trait “concise” (Tickle, 2011, p. 183). **11.** A short philtrum signifies the person who “takes things personally” (Tickle, 2011, p. 192). **12.** An asymmetrical face is the trait that belongs to a person who experiences mood swings (Tickle, 2011, p. 21). **13.** A wide face denotes the personality trait “confident” (Tickle, 2011, p. 97)

During the second step, everything but the needed facial trait was erased from the each illustration and facial traits were assembled in a single image (Figure 46). The actual facial traits (lips, nose, forehead, etc.) were assembled according to the traits that denote facial proportions (short philtrum, wide face, high eyebrows, etc.). Figure 47 illustrates the process of building an image of face according to the given facial traits and proportions. Among the obtained facial traits were eyebrows of two types: straight underside and ‘half-moon’ (Figure 46, images 3 and 4). These were merged in order to constitute a shape, which has characteristics of both. This was made in accordance with Tickle (2011), who stated that each person usually has a degree of each trait. Figure 48 shows the completed face, which became the prototype of the ‘face of Piha’.

*Figure 47.* The process of building an image of face according to the facial traits and proportions, showed in the Table 4 (Tickle, 2011, pp. 21, 23, 51, 77, 84, 89, 92, 97, 104, 135, 147, 183, 192)

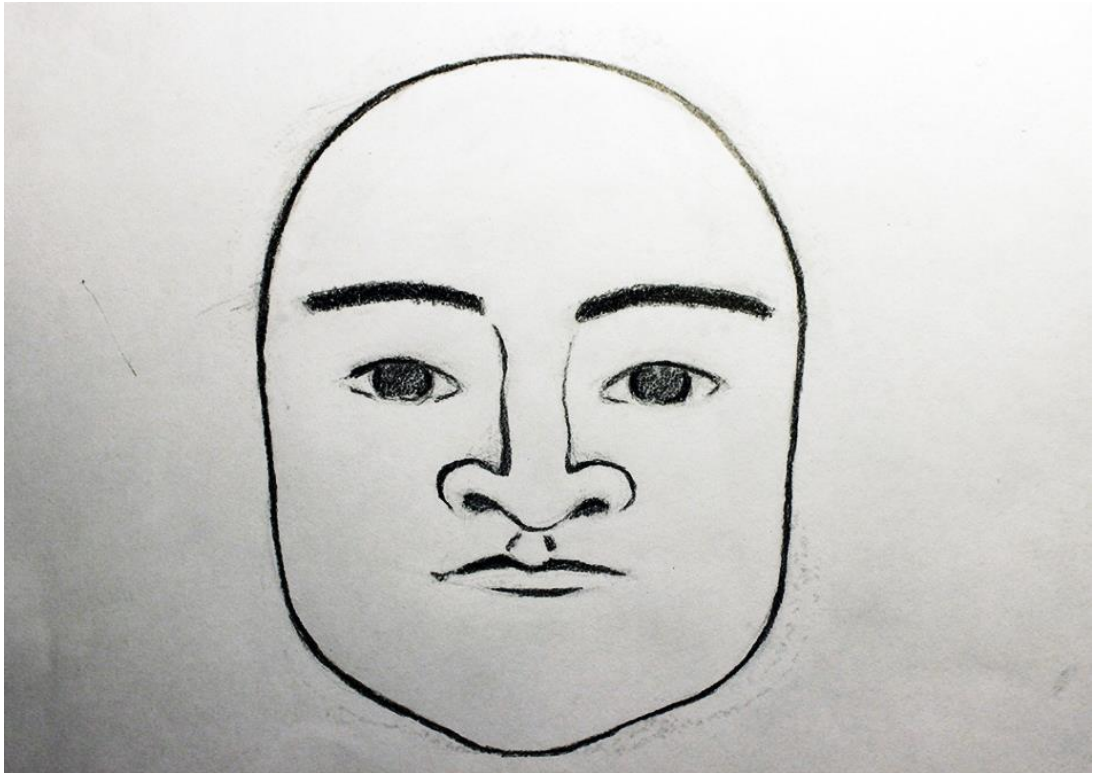


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*Figure 48.* A completed face, the prototype of the ‘face of Piha’, built using illustrations from Tickle (2011, pp. 21, 23, 51, 77, 84, 89, 92, 97, 104, 135, 147, 183, 192)

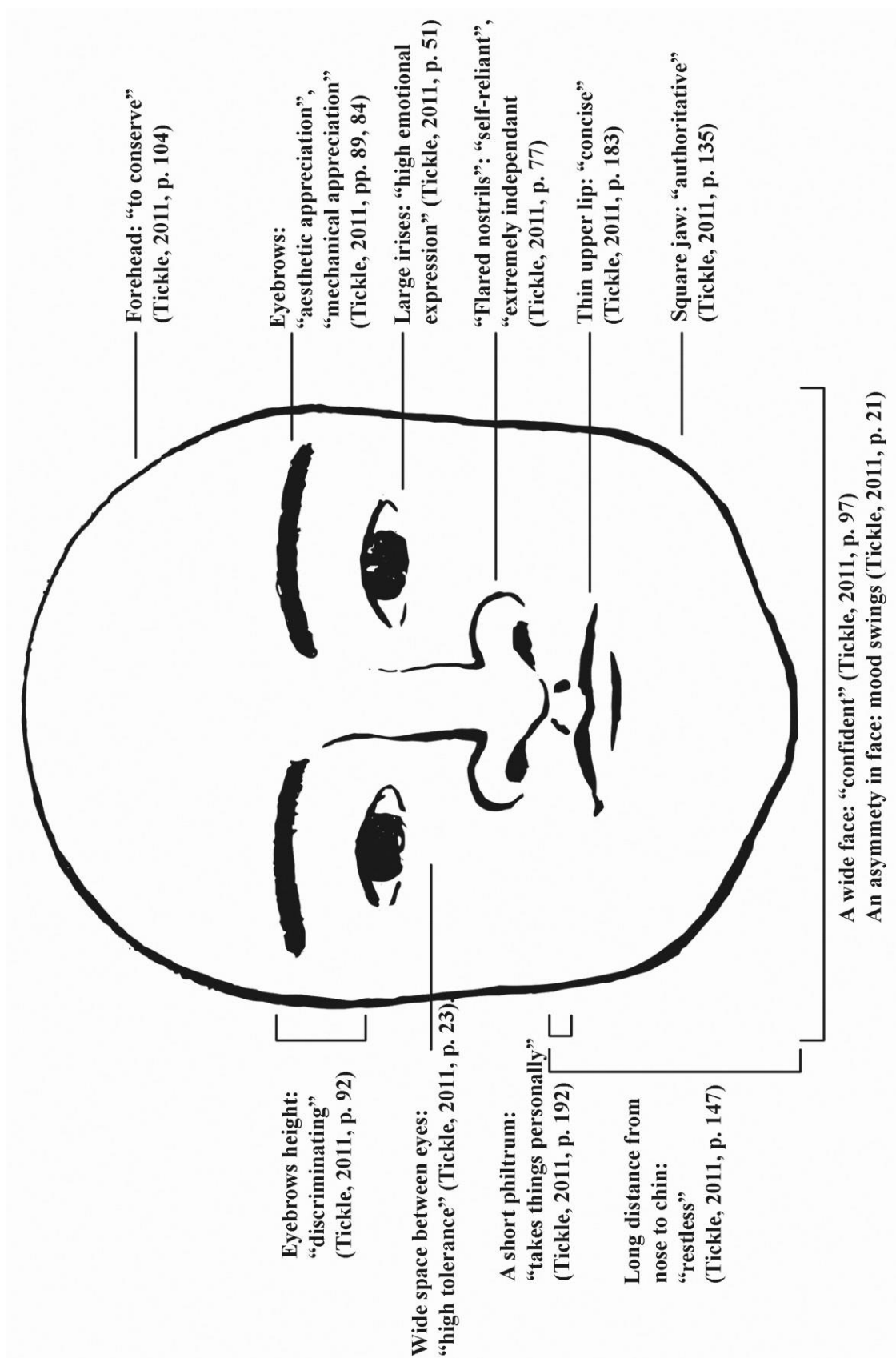
In order to complete the third step of the creative synthesis, the image of face (Figure 48) was printed with an opacity level of 50%, after which the sketch of the face was completed (Figure 49). The facial traits, demonstrated in Figure 48, became a prototype of the face displayed in Figure 49. Figure 50 provides annotations to the facial features of the completed face, which, according to the objective of the ‘face-method’, embodies my personal impressions about Piha.



*Figure 49.* A sketch of face, completed based on the prototype displayed in Figure 48



Figure 50. Description of the facial features of ‘face of Piha’



## Chapter 8: Discussion

The research workflow is designed in order to establish a ‘face-method’, an approach of embodying sense of place in an image of the human face using theories of anthropomorphism and physiognomy. The theories of anthropomorphism and physiognomy are synthesised into a tentative workflow, using the phases of heuristic research as a framework, described in Chapter 4: Research Design. In this chapter, I discuss the actual process of implementing the ‘face-method’ and note on its strengths and weaknesses. Following, I discuss the outcome, the resulting image of a human face that has been created on the basis of the data about sense of place. After, I outline improved steps of what can be considered the finalized ‘face-method’ approach. In the concluding section of this chapter, I discuss the advantages and limitations of the finalized ‘face-method’.

### 8.1 Reflection on the Research Process

In this section, I review the research process according to the sequence of its procedures. I begin by discussing the procedure of data collection and the creative synthesis phase in order to note on the advantageous and ineffectual steps of the process.

#### 8.1.1 Data Collection Process and Methods

The proposed procedure of data collection, outlined in 4.2.1 Data Collection Procedure, proves to be an appropriate approach to collect the data about personal impressions of a place.

Fieldwork enables collection of data through personal discovery of a place. The personal contact with chosen location helps to develop a relationship with it in depth, to form the personal perception of a place, and to reflect to this perception. Meanwhile, the tacit knowledge about the place grows simultaneously through the contact with it. I would compare this to the knowing the street, where I live. When I am walking home, once on my street, I feel comfort linked to feeling that very soon I should be at home. This happens even if I do not look around in order to recognise the street. In fact, I even cannot remember the precise colour of each house and the precise length of the street. Similarly, my perception of Piha exceeds my knowledge of its formal appearance and measurements due to extended personal contact with it, and is the sum of my experiences of being at Piha.

The proposed and implemented flexibility in identifying spatial focus during fieldwork proved to be an advantage, as it permits to establish focus in an unconstrained way, based on the personal perception of the place. The points of interest at the place are formed during the personal presence at the location. I would call these points of interest the ‘spatial nodes’. During fieldwork, one’s attention returns to these ‘spatial nodes’ again and again. Lion Rock is such a point of attention in this research.

The heuristic process of focusing significantly aids to the process of establishing personal contact with a place, because it helps to put away any daily concerns and to tune into the process of acquiring information about a place. I found that focusing provides a sort of buffer between my daily routine and performing task of personal discovery of Piha. I may compare this with switching between tasks of choosing an optimal electricity pricing plan to daydreaming. Given the difference between these tasks, some sort of transition is needed.

According to my experience, the process of focusing provides sufficient help in switching attention to the point of interest.

The duration of fieldwork is identified as seven days. This is in accordance with the time schedule specifically for this research and may vary in any other case. According to my experience, seven days afford sufficient time to collect data about personal perceptions of a place. The initial plan provides breaks between the days of fieldwork in order to keep fresh impressions of the place, which turned out to be a needless measure. On the contrary, these breaks interrupt the process of development of sense of place. Instead one prolonged experience of being with Piha, I obtained seven experiences. My personal impression is that these seven experiences are shorter in length, thus lesser in depth.

Textual notes, sketches and photographs provide appropriate methods to record data on sense of place. Notes afford first-hand data recording, while photographs and sketches provide visual documentation. Sketches prove to be a very useful method of recording personal impressions of a place. Quickly made, they help to make a record in an expressive and representative way. Photographs are an advantageous method to collect data about personal impressions, because these capture sceneries and objects in the way seen during fieldwork. Photographs help to maintain the sense of place by providing visual depictions of scenes seen during fieldwork. Visual documentation is also important, as, by looking at the specific image, I could remember my own feelings while capturing the specific moment. Moreover, the pictures helped me to recollect circumstances of each captured moment.

According to the established procedure of data collection, notes are taken in the beginning of each hour for no longer than ten minutes. This plan may be amended by two conditions.

Firstly, notes should be taken not only in the beginning of each hour, but at any time. This would help to keep more detailed records of personal impressions about the place. Secondly, the need of taking extensive notes about personal feelings should be especially stressed, as this data provides significant aid in the process of data analysis and identification of major characteristics of place.

### 8.1.2 Data Analysis

Implementation of heuristic steps in the process of data analysis assisted well in finding of essences of the personal impression about Piha. Heuristic steps afford progression in task of unveiling core meanings of personal experience from the surface examination of data to discovery of data meanings. Heuristic analysis allows me to discover data essences relying on tacit knowledge and intuition. Tacit knowledge is unrecorded, but still a crucial constituent of experience of being at, or with, Piha during period of time. Meanwhile, intuition helps to put the constituents of my experience – recorded and unrecorded data – together, imagine what would be the result of composing these into one, and find the inner answer to whether the result would feel like those personal feelings about Piha.

Creative synthesis permits the implication of the anthropomorphic framework proposed within the research in order to synthesise the major characteristics of a place according to the personal experience into personality traits. In turn, the anthropomorphic framework provided by combination of the theories proposed by Epley et al. (2007) and Persson et al. (2000) and described in 2.3 Anthropomorphism proves to be simple to implement. The process involves reasoning about non-human entities in terms of human character based on personal experience, with no restrictions to the depth of the experience. According to Epley et al.

(2007) and Persson et al. (2000) people have natural ability to perform this task. My overall successful experience of interpreting Piha's characteristics in terms of human character proves this statement.

Generally, implementation of the physiognomic approach for visualizing personality traits provides sufficient information for identification facial traits for the given personality traits. Three drawbacks must be specifically marked. Firstly, physiognomic descriptions usually provide a description of a personality trait based on facial appearance. This means that reverse application of the theory requires full examination of the content of the chosen physiognomic approach. To resolve this issue, I completed a physiognomic chart, as exemplified in section 2.5 Physiognomy. Description of personality traits in chosen physiognomic approach is the second issue. In order to correlate anthropomorphised characteristics of a place with personality traits, described in physiognomy, the meanings of described personality traits, rather than the actual words in their description, should be considered. Table 3 demonstrates that the linguistic descriptions of personality traits, provided by Tickle (2011), normally do not match the descriptions of personality traits, assigned to the characteristics of a place. Thus, the process of comparison of personality traits, identified for a place, with those described in a physiognomic approach requires reliance on the personal knowledge of human characters and intuition. The third issue is that of use of illustrations of facial traits of certain physiognomic approach as pictorial references for visualizing facial traits. These illustrations are generally limited to a single interpretation of a specific facial trait that is presented within a single image of face. Despite the statement that physiognomic rules are applicable to faces regardless the race or gender (Tickle, 2011), in the implemented approach, only a single facial image of certain race and gender demonstrates each trait. This causes questions of reliability of such images for references,

because, as an outcome, the created face obtains certain race and gender caused by pictures used as references, but not provided by primarily data. For example, the created face of Piha appears to belong to a man rather than to a woman, the fact, that data analysis does not enlighten.

### 8.1.3 Creative Synthesis

Overall, the proposed process of creative synthesis was easy to implement and did not cause any specific difficulties. It should be noted, however, that creative synthesis involves the process of intuiting the whole face on the basis of given facial traits. Additionally, the process of combining facial traits, obtained from physiognomic descriptions, requires a basic level of expertise in work with graphic software.

## 8.2 Evaluation of the Research Output

As the result of the first trial of the 'face-method' I created an image of the human face to visualise my sense of Piha. Technically, the result can be accepted as successful, if the image of face actually reflects my sense of Piha. However, the concept 'sense of place' is difficult to measure. It remains a personal experience. Explicit knowledge on sense of place is recorded with data of notes and photographs. To evaluate the obtained 'face of Piha', I compare my impressions about the image with the explicit knowledge about the place, recorded in data, and also use my implicit knowledge by comparing impressions about the image to my impressions about Piha.

To obtain my impressions about the created image, I evaluate the ‘face of Piha’ and decide what kind of personality traits, in my view, the person with such facial features might have. To my personal view, a wide jaw witnesses about strong, confident personality, while the tight line of the mouth and the form of the nose with wide nostrils reveal determined character, and, perhaps, stubbornness. This corresponds to several major characteristics of the place, obtained from the data (Table 3): “The nature of Piha is very impressive and gives the impression of strength, which is difficult to resist”, “Piha radiates power: here it becomes obvious that humans can do nothing against natural forces” and “Majestic, but can be dangerous”. To me, a wide face marks independent character and a calm temper. This corresponds to the major characteristics “Pace of life is free of tight schedule, relaxed atmosphere” and “Rare natural features; the sense of independency from the ‘big’ city”. Large eyes signify a somewhat naïve, but straightforward and honest personality. This generally corresponds to the major characteristic “Nature and natural materials (wood) prevail in human-made objects”. Relying on the conformity of major characteristics of the place (Table 3) with my perception of the created face, I conclude that the created face reflects my overall impressions of a place.

In Chapter 1: Introduction, I assume that the depiction of environment with an image of the human face could be a step forward in developing human natural inclination to anthropomorphise environments. The result of the research demonstrates that the task is achievable and, despite certain limitations, it is possible to construct visual depiction of anthropomorphised environment. At this stage, I may not tell, whether this face makes me understand Piha better. Nevertheless, it definitely allows me to see it in a new way.



### 8.3 'Face-Method': Revised

After the first implementation, the steps of the 'face-method', outlined in 2.7 Literature Review: Summary, are revised. The 'face-method' is informed with qualitative methods, used to collect and analyse data. The steps of the method are finalized as follows:

1. Collection of data on sense of place during personal contact with the place. Data on sense of place is collected according to understanding of sense of place in humanistic geography: through emotions, perceptions, and reactions to perceptions and experience of being at the place. The heuristic process of focusing is implemented to collect data.
2. Analysis of data with five steps of heuristic analysis: immersion, incubation, illumination, explication, and creative synthesis, specified in 4.3.1 Data Analysis: Stage One. The major characteristics of a place, as perceived through the sense of place, are identified as the result of the first four steps. In the concluding step of creative synthesis, the major characteristics are interpreted as personality traits, using the anthropomorphic framework, suggested by Epley et al. (2007) and Persson et al. (2000), outlined in 4.3.1 Data Analysis: Stage One. The process of this step of 'face-method' requires reference to the tacit knowledge about the place and intuition. Execution of creative synthesis requires reference to the personal knowledge about human characters.
3. Comparison of personality traits obtained in the previous step with those described in chosen physiognomic approach. As a result, the facial traits that match to revealed personality traits are obtained. This step requires one to rely on personal knowledge about human characters and appeal to intuition.

4. Creating face by merging facial traits, obtained in the previous step, using a four-step process described in 4.4 Creative Synthesis: Description of the Procedure.

#### 8.4 Identified Advantages of the 'Face-Method'

The strong side of the method is that it is based on the natural human capacities to build sense of place (Tuan, 1979), anthropomorphise environments (Boyer, 1996) and make intuitive judgements (Polanyi, 1962). The natural interest in faces (Bruce & Young, 1986), the ability to read physiognomy (Tickle, 2011) and the aspiration to obtain information by evaluating faces (Garland-Thomson, 2006; Eysenck, 2006) add benefits to the chosen form of visualisation of impressions of a place in an image of the human face. The fact that the method is based on natural human abilities makes it universal and easy to be applied by almost anyone.

A further advantage of the suggested method is that it provides guidelines to visualise the sense of a place with a specific, defined type of visual, an image of the human face. As mentioned, Tuan (1975) asserts that places are known through the sense of place, which must be visualised in order to make each personal sense of place a shared knowledge (Tuan, 1975; Entrikin, 1994). They assign this task to artists. In turn, artists depict places not by copying these, but by inventing a pictorial equivalent of what they perceive (Arnheim, 1947). As the result, artistic depiction generally differs from the reality (Gombrich, 1977). Not only do pictorial equivalents, created by different artists, differ from one another, they are also not comparable, because, being the artists' personal visions of reality, they are all valid by default (Arnheim, 1947). The method, explored in this research, provides a possibility to embody the

sense of place of different people into a pictorial equivalent of the same type, an image of the human face. In perspective, this opens up opportunities to compare and evaluate human impressions of a certain location.

Another benefit of capturing sense of place with the explored method is the possibility to depict one's sense of place independently of the presence of talent and skills to create paintings. Tuan (1975) specifies that artists have the unique talent to express their sense of place in a tangible form. Through the steps of the developed method, almost everyone, with minimal drawing skills, may express his or her sense of place visually.

#### 8.5 Identified Limitations of the 'Face-Method'

The proposed method has a number of limitations. Two of them are due to the involved key theories: anthropomorphism and physiognomy. Even though anthropomorphism is widely recognised as a persistent characteristic of human perception, its processes are not sufficiently understood (Epley et al., 2007; Persson, 2000). In turn, physiognomy, being a steadfast concept, reaching from the antiquity to these days, does not have a universal approach. The 'face-method' explored in this research is built on the approach, suggested by Tickle (2011). It is possible, that the 'face of Piha' would look differently, if the 'face-method' was built on a different approach (e.g. Lavater, 1869; Rosetree, 2001). The third limitation is due to the nature of the process of the 'face-method', which involves reliance on intuitive knowledge and subjective judgment about features of human character. As the result, the method affords a highly subjective result in each case of application.

## Chapter 9: Conclusion

The purpose of this study is to develop and test the method of creating an image of the human face based on personal impressions of a physical location. The research began with the assumption that theories of anthropomorphism and physiognomy may be brought together in order to frame the procedure of creating an image of the human face based on personal impressions of a place. In further sections, I review key findings of this research, their possible implications, note on the limitations of this study, and outline perspectives for the future inquiries on the topic.

### 9.1 Key Findings

The completed process of creating a face of Piha based on the personal perceptions demonstrates that the theories of anthropomorphism and physiognomy, indeed, can be brought together to constitute a method for embodiment of personal perceptions of a place in an image of the human face. The reviewed literature confirms that the theories of anthropomorphism and physiognomy complemented with theories of humanistic geography provide an appropriate theoretical base, including necessary definitions, guidelines and processes, for establishment the ‘face-method’ in theory. The exploration of the ‘face-method’ in practice shows that the theoretical guidelines of the method, applied with qualitative research methods, constitute sufficient guideline for the process of the embodiment of personal perceptions of a place in an image of the human face .

### 9.2 Implications

The 'face-method' may assist in exploration of people's sense of a place. The importance of creating an image that reflects one's sense of place in order to explore one's sense of place was emphasized by Tuan (1975) and Entrikin (1994). Since the 'face-method' provides possibility to create a pictorial equivalent of personal perception of a place, it helps to transform personal feelings, hidden from everyone, into the tangible form. Expressed as an image, personal perceptions become a shared knowledge. This opens possibility to explore sense of place of a particular person or a group of people. For example, it can be investigated, how one's sense of a particular place is changing in time, or how sense of the particular place of different people would appear when presented as an image of the human face.

Furthermore, implementation of activities involving the 'face-method' may assist in promoting conservational behaviour. Tam et al. (2013) found that participants, when asked to draw a poster that promotes conservational behaviour, tend to anthropomorphise nature and create an image of the Earth having a human face. Meanwhile, Chan (2012) confirms that anthropomorphising environments can stimulate conservational behaviour, because when anthropomorphised, an entity becomes deserving for moral compassion.

### 9.3 Limitations of the Research

The process of development and exploration of the proposed 'face-method' has a number of limitations. The first limitation is that of the choice of methodological framework for development of the method. The 'face-method' is established using heuristic methodology, involves qualitative methods for data collection and heuristic methods for data analysis. One might argue this approach lacks rigour as questions on validity can only be addressed by the one undertaking the 'face-method'. Another limitation exists in regards to the specific

theoretical approaches of anthropomorphism and physiognomy involved in the study. As the literature review revealed, a number of theoretical approaches exist, and involvement of different theories may result in different research results. Finally, the study limited by applied physiognomic approach, suggested by Tickle (2011), as the reliability of data within the approach remains questionable.

#### 9.4 Further Research

The process of creating a 'face of a place' in the proposed 'face-method' is built on basic rules of physiognomy, which affords creating a face that has a neutral facial expression and indefinite gender. Future research may be conducted to develop the 'face-method' by proposing processes that help to specify the gender of the depicted face and define its emotional state. The gender could be defined by employing theories about gender-personality characteristics (e.g. Park, 2012) and including a new step between the second and the third step of the 'face-method', as described in 8.3 'Face-Method': Revised. In the added step, personality traits, identified from major characteristics of the place, may be examined to identify, whether they are primarily feminine or primarily masculine. Facial expression may be added by considering theories about the connection between facial expression and emotional state (e.g. Ekman, 2007).

At the present state, the method is designed in a manner, that, in order to obtain the result, the same person should implement all steps of the method. This is because every step of the method requires the personal presence of the person, whose sense of place is to be visualised. The processes of the method can be developed so that participants collect the data while a

researcher completes the analysis. For this purpose, processes of validation of the outcome of each stage of analysis should be established.

Future research can also inform the present study by developing and proposing processes for creating a face of a place based on perceptions of number of people, which could help to explore the sense of the place of members of a single social group, for example sense of place of people who live in that place. This could be done by investigating possibilities of summarizing personal perceptions of the members of a group within steps of the ‘face-method’. For example, when major characteristics of a place found for each participant during the second step of the ‘face-method’, these major characteristics could be summarized in order to identify the most common ones, so that these major characteristics are used to create an image of a face. Alternatively, the process of ‘face-method’ could be implemented for each participant separately, and the created facial images could be merged with help of graphic software in order to obtain a single portrait.

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# Appendixes

## Appendix A

Notes collected during the fieldwork on October 13, 2013. The photographs, taken on the this date are found in Appendix B

Piha  
Sunday, 13/10/13 on the road  
7.00 quiet, but nature is everywhere. birds of diff. kind. Pukelo crosses the road. Bees on the field, ducks walk around. People - yes. Apparently locals and those who are staying in local track. locals: parent (dad) with kids (two boys) and dog are walking around beach breakfast

It is too windy and not warm that I wore the hood on top of the cap. A young woman (looks like visitor) walks along the beach by the water spreaded hands making windy. Some locals go for a morning walk with dogs. When I was walking from hostel to the beach I saw woman who went for a morning run with a dog and when she reached certain house, she and the dog got chased by two Obapuuu that seemed aggressive. But when owner called them back, they obeyed. Cafes and other public places are closed (how ever it seems that there is some life). On the whole place doesn't look welcoming today at this time at all. (Grey sky, wind, big waves from yesterday's strong wind) sounds: birds singing, waves, wind.

8.00 Sun popped out for short time and place became different. rent the same moment.

All that is green (and here is lots of green) became shiny and warm and not okay. Because when it is grey weather local landscape looks somewhat threatening. It looks like forces of nature are about to take over.

2 birds (moleos) feeding. I took my way to a cafe. That remained closed. But the local dairy shop was open and it seemed that locals and some visitors are coming here for coffee or fresh bread, or to hang out and read news paper. Here I found my coffee that was "big" long black, double shot, but \$4.00 which is, well, expensive. People were one man with dog was reading newspaper and his ginger dog was sitting by him. He seem to be willing to talk. We exchanged with some words about morning and dogs. Company of guests smelled as alcohol were

buying something. The girl at the counter seemed to be very lively (blond) and full of energy, which suits to this place. Some "cool" "cert" music was playing. I sat at the table by the window shop, maybe different cafe. Woman came (to pick up something) and I asked if it's ok that I'm sitting here, maybe this belongs to this shop? She said "relax", "everything is ok, I just came to pick up some stuff."

The weather is grey again, people come to shop and go, but definitely no crowds. Sound: birds chirping, music playing, people talking at the shop.

Weather is grey again.

9.00 under shelter.

The weather is still grey, waves are wild and foamy. Oh, sun came out again!

It says about "three big community events" in Pina and harbor before Christmas. Some festival by West Coast Gallery, ~~Point Market (28/10)~~.

Pina Market (28/10) and other fundraiser in the karekare glade. Karekare seem to be "relativo" of Pina and no wonder - this is a next big beach.

New weather is sunny again, but windy as it looks it might change any minute again.

People walk barefoot...

- So far I haven't seen any benches. Just walking ways. Is it because it's claimed to be "active" place?

10.00 beach and table by the parking in front of a lion rock.

Nice and quiet, however life is already started. There are some works (no ~~advertisements~~), ~~performance~~

Still windy though. Somehow the day light and weather change the local landscape dramatically. When it is sun it is wildly beautiful and I would never leave this place. When it's windy, grumpy, gray and cold it is hard to imagine why some people want to live here. First, it is quite hard to get here (only on personal car, buses are not regular and very expensive) and road is quite dangerous. Wild, wild at ~~flurry~~ surge and condition. Wildly beautiful and wildly scary. + waves. This is a west coast. This is a surf place. Nothing more could be said.

Birds are singing, people walking. They greet each other "Kevin, yohuu!" in a very casual manner. Sense of local community. The News Paper I get to have a look in shop called "Pine Community News".

Genet 20-20 c gezebook was ~~run~~ <sup>not many</sup> people walk along the beach. Quite active car movement. Some one with the dog on a play field. People are friendly, someone wished me a good morning (she and a man were walking somewhere in a sporty clothes) Some people coming to the beach with a tent (but wind is far too strong) Other walk with small kids (8 karekare) New people are arriving to the carpark probably in order to spend some nice time here.

I met big ginger dog, a mate, he was without ~~ambulance~~, but very tidy and cool. There were already some ppl climbing the lion rock. Sounds: wind, birds, waves, some

times people talk or some car sounds.  
Weather is windy and cloudy, however temperature is comfortable. Sometimes sun comes out but not for long.

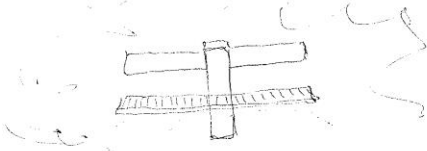
11:00 toward parking cafe

People are coming to Pihā from city for a walk and a "weekend" time. Come as couples, as families. They walk at the beach, walk with dogs. Cafe is getting more busy.

Weather is nice, but windy. Cloudy. Sometimes sun comes out. I found a free wifi spot in a cafe and a breakfast that was nice, but not cheaper than one in Auckland.

Sounds - music in a cafe, people talk, (at one of tables they're discussing some business things), apparently

1 pm bench by the river



Well, now Pihā is busy with people who walk here # some play, some take photos, some go "for swim" well, not really it is possible to swim here, waves are big and current drags one into sea.

Not only in groups people are here some with families, some with friends, some by themselves. Locals and guests. Tourists quite often can hear foreign speech.

Birds are chasing each other protecting their territories.  
Strong wind have pieces also - clouds are carried away and it's sunny. even hit.

organisation of some event. People often greet each other - they know each other. On the road they just greet those who walks here, too.

Sounds - wind outside, still can hear waves,

Weather is warm, cloudy, sometimes sunny, windy.

12:00 pm noon parking at (The first beach by the ~~surf school~~ Pihā Surf Life Saving Club)

More and more of people coming here with families for a walk. There are still lots of free places at the parking. People are walking at the beach, drinking the lion rock, hearing picnics at the places protected from wind (the community that took "my bench")

Sounds birds, waves wind, sometimes people. Weather is windy and sunny atm.

still windy.

Sounds: birds, waves, wind, sometimes people, dogs bark.

2 pm shop - cafe.

That's Sunday! Leisure time. Ppl everywhere busy. Walking coming by cars, cycling. The most crowded space is beach. Of course. That's why ppl are coming. This place could be reached just by car. Does it make the access to a place "special"?

Suggestion: make "my map" with showing places. But maybe I don't need this.

People hanging out at the beach. Walk, pedalboarding.

S: here in cafe it is quiet, still can hear wind.

Weather is windy and sunny.

A lot of cars around.

3 pm Further beach. # this afternoon quite a few people are walking

around here, along the coast.  
Sometimes groups of friends,  
sometimes families, sometimes  
couples, dogs, quite often.  
I never heard so much of  
dog's bark, but here now  
it's already a bit less of  
people, but still they are ev-  
erywhere.

Sounds of sea, smell of  
sea. Can't hear birds  
here.

Children build something  
of sand. Sunny, a bit windy.

4 pm (bench in front of lion rock)  
Less of people, but there  
is obviously movement.  
Lots of ppl with children,  
more couples and groups  
of friends. They walk  
along the beach, with their  
dogs, play, take pictures,  
climb lion rock  
sounds: birds, waves,  
people talk, curs.  
Weather is sunny and a  
bit windy

Weather is warm a bit  
windy, cloudy, but still sun  
can break through.

Suggestion: gender could be  
defined with help of Laurén's  
rules.

7 pm

Not a lot is happening  
around. Wind, waves and  
birds, and couple of  
russians practice jump on  
the lion rock.

Sounds: birds & waves and  
nothing else

Weather is nice and warm  
and sunny, cloudy but sun  
is still seen. Light wind.  
Beautiful eve.

8 pm Pina café

Maybe this is already  
evening here. At least time  
to leave cafes and beach  
and go home. Cafe is  
almost empty and staff  
is already cleaning and  
taking stuff away. People  
rarely come to cafe from  
beach. Leisure time. Laugh.  
Relaxing music in a cafe.  
People with wet dogs.  
Tired wet dog felt on  
the step - this how it is  
exhausted by game and  
walk. Sound: light music, ppl  
talk. Weather: cloudy again,  
not that sunny.

6 pm

Nature stayed with itself  
again, almost all visitors  
are gone, left just steps  
on the sand behind. Waves will  
clean up these steps and it  
will be again how it was  
before anyone came. Occasio-  
nal sounds of conversations,  
mainly waves and birds.  
(pocket of coffee)

## Appendix B

Photographs, taken during fieldwork on October 13, 2013.

(DVD attached)