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Main Article:

Aesthetic Responses Made Visible Through Voices of Experts

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Abstract

Professional expertise used to play an important role in the field of environmental aesthetics: expert judgements of landscapes and urban scenes were driving forces behind the decision-making process for urban planners. Today however, research in this area is dominated by studies of public opinion and statistical analysis of anonymous data. This article examines the development of professional expertise in environmental aesthetics and proposes to rethink the role of experts and their contribution to the field by addressing tacit processes behind their judgements. Following an interdisciplinary literature review, an approach that relies on active engagement and reflection-on-action is presented. The application of the approach is studied in two empirical cases, demonstrating the possibility of generating insights into the nature of aesthetic experience. The article suggests reconsidering and widening the profile of the expert in environmental aesthetics to blur the divide between experts and lay public as well as between the users and producers of knowledge.

Index Terms: environmental aesthetics; visual quality; landscape assessment; professional status; aesthetic engagement; expert judgement; observational drawing; reflection-on-action

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1. Introduction

This article looks at the topic of professional expertise in a specific context of environmental aesthetics, an interdisciplinary area of study concerned with why we appreciate spaces we inhabit. Empirical research and practice in this area has traditionally relied on expert judgment to evaluate the visual quality of a landscape. However, due to a changing context of the professional practice and scientification of the field, the expert paradigm went into a relative decline by the end of the 1970s, shifting the research agenda to studies of public opinion as an indicator of aesthetic preference. In a more recent perspective, research practice in environmental aesthetics faces new challenges due to a growing complexity of the object under study: today's human environments tend to become more dense, diverse, chaotic, and less amenable to existing methods of laboratory studies.

The article is based on an ongoing study which has two aims. First, it expects to bring the expert back to the forefront of research practice in environmental aesthetics. It seeks to do this by examining how experts deal with disorders of the real world (Abbott, 1981, p. 829), by exploring their capacity to conduct on-site investigation of urban settings rather than rely on laboratory research methods. Second, the article aims to demonstrate how insights about aesthetics of observed spaces may be generated from intuitive experiences. To achieve this aim, the study focuses on the intuitive processes that define aesthetic responses towards complex environmental settings, which can be articulated through the voices of experts.

The article first examines the topic of expertise in a wider context of professions and makes a background inquiry into the rise, fall, and critique of the expert paradigm in landscape assessment—an applied dimension of environmental aesthetics. It proceeds by outlining an alternative research setting based on active engagement through observational drawing and reflection-on-action, a process of making sense of an action after it has occurred (Eraut, 1995, p. 16). The theorized setting is further examined with the help of two empirical cases which demonstrate a possibility of generating insights about the aesthetic values of the observed space.

The article concludes by addressing the limitations of the proposed research practice and suggests reconsidering the profile of the expert who can utilize the approach to explore the tacit processes that inform aesthetic judgements.

2. Background

The question of professional expertise belongs to a wider discourse on professions and their role in society. To understand why experts gain and lose trust, it is necessary to look at how professions operate and constitute themselves in relation to the public and the state.

Originally, professions are believed to play a positive part in the community and they are considered to possess unique characteristics that differentiate them from other occupations (Saks, 2012). The positive aspect of professions can be seen clearly in the definition by Leggins (1976): "[A professional is] recognized as having a special skill and learning in

some field of activity in which the public needs protection against incompetence" (p. 488). Other positions treat professionals as agents of "formal knowledge," which is high in complexity, quantity, and sophistication (Freidson, 1988). Possession of this knowledge gives professionals a possibility to obtain power and take a privileged position in society, creating knowledge monopolies or acting as gatekeepers (Brint, 1993). Foucault associates professions with power, referring to the "institutionalisation of expertise" and problematizes professions as instruments of governmentality that reinforce dominant state discourses (Gilbert & Powell, 2010).

Numerous arguments concerning professional decline question the dominating role of professionals. These arguments focus on the loss of public trust and confidence in professionals because of changes in the attitudes and behaviour of the public as well as the character of the professional knowledge (Freidson, 1988). These changes include increases in the education of the general public and, as a result, an ability to question authority of professionals. The feminist movement, with its intention to challenge the exclusively male professions, is among other factors leading to the loss of faith in the supposed benefits of professionalism (Gane, 1993, p. 146).

2.1. Expert Approach to Landscape Evaluation

In the context of land management practice, environmental aesthetics has shifted from the philosophical discourse on aesthetics of environment that originated in the eighteenth and nineteenth centuries towards a more applied dimension—visual landscape quality assessment or landscape evaluation.

The expert approach to landscape evaluation has emerged from the intersection of two intellectual traditions: the visual arts/design and resource management (Taylor, Zube, & Sell, 1990). It uses a mixture of measurement and judgement (Price, 2003) based on the ability of trained professionals to translate features of landscapes such as mountains, lakes, or trees into formal criteria. Two types of these criteria can be identified in literature: (a) physical (e.g., scale, boundaries, landform, and plant cover) (Taylor, Zube, & Sell, 1990) and (b) abstract (e.g., form, line, texture, colour, unity, and variety) (Daniel, 2001). The latter is sometimes referred to as the formal aesthetic approach (Daniel & Vining, 1983), pointing towards the "true aesthetic values" that guide the assessment process (Daniel, 2001, p. 272).

The "superior" ability of experts, a term from Taylor, Zube, and Sell (1990, p. 364), is often openly articulated. Carlson (1977) advocates the role of the "environmental critic" who performs non-empirical aesthetic assessments based on own previous knowledge. He argues that the public lacks the experience and knowledge necessary for being fully sensitive to aesthetic quality: "What we like is one thing and its aesthetic quality quite another" (Carlson, 1977, p. 150). This point can be illustrated through an analogy with art, where the critic articulates the aesthetic value of the artwork for the general public.

The adoption of the expert paradigm is a result of economic and legal concerns in environmental management practice. Indeed, in many cases expert evaluations help to facilitate decision making for city planners; they provide a measure of landscape quality,

often numeric, which characterizes the relationship between properties of the landscape and the effects of those properties on the viewers (Daniel, 2001). Due to this fact and because it addresses attributes of the environment that can be manipulated, the expert paradigm is considered high on utility and is widely used by land management organizations and agencies who often customize the evaluation principles to fit their own interests.

2.2. Critique of the Expertise

Later studies highlight the controversy of relying on expert evaluations. Daniel and Vining (1983) criticize expert landscape quality assessments for having a low level of precision, being based on a small number of landscape quality gradations. Palmer and Hoffman (2001) question the reliability of individual judgements, demonstrating the discrepancy between ratings of different judges. Lothian (1999) is concerned with replicability of the approach, pointing to its inherent subjectivity which leads to the inability to defend the result in a judicial appeal. Ribe (1982) opposes Carlson's perspective on environmental experts as art critics, by stressing the importance of contextual knowledge for understanding art. According to Ribe, sensitivity to nature is universal, and contextual knowledge is available to not only the expert but also everyone, irrespective of their professional background.

Additionally, there are numerous accounts that draw attention to the discrepancy between professional opinions and preferences of the general public. Among them are studies that demonstrate "a rift between what architects like and what the public likes" (Nasar, 1994, p. 378), highlighting a potential mismatch between the expert's and the layperson's judgements of scenic quality. For example, Groat (1988) finds that the judgements of new infill buildings vary between experts and non-experts and that the two groups use different criteria for judging. In the same line of argument, Vouligny (2009) indicates that the value of ordinary landscapes is aligned with formal visual criteria for experts, but for inhabitants (i.e., the public) it is based on a set of criteria related to their emotion, everyday experience, and intimate knowledge of places.

Consequently, the critique of the expert paradigm stimulates interest in alternative methods of landscape assessment in which laypersons are used as judges instead of experts. These methods develop under psychophysical and cognitive paradigms (Taylor, Zube, & Sell, 1990) and involve a large sample of people whose preferences towards presented scenes are statistically compared to certain parameters of the space in order to identify possible correlations (see, e.g., Arriaza, 2004; Galindo, 2005; Motoyama & Hanyu, 2014). A turn from expert-based evaluations to public preferences has another important underpinning—the shift in the needs of city planners. Instead of facilitation in decision-making, replicable studies examining public interests are in demand to solve potential conflicts between the authorities and the citizens. "Objective measurement . . . would provide better justification to an increasingly concerned and skeptical public than do intuitive assumptions or unsupported expert opinions" (Daniel & Boster, 1976, p. 4).

Two concepts from the social study of professions are helpful in explaining the decline of professional expertise in environmental aesthetics: abstraction and the interplay between

order and disorder. According to Abbott (1988), abstraction—the use of abstract knowledge—is one of the key characteristics of professional expertise. Professional practice proceeds by "applying abstract knowledge to a particular situation," which is defined as a case and rendered in professional terms (Abbott, 1981, p. 826). Mieg, de Sombre, and Näf (2013) examine the concept of abstraction in relation to environmental professionals in Switzerland. Their research links abstraction to scientification of the profession which represents a particular form of social closure within science when a new discipline of environmental science is born.

Order-giving power is a quality that allows professionals to achieve high public status: "all the professions attempt to tame disorder or to create new order" (Abbott, 1981, p. 829). By disorder, Abbott understands the "impure" complexities and circumstances with which professionals are confronted, often within the social domain. Effective contact with the disorderly becomes the basis of high professional status in society. However, as Abbott notices, when professionals seek the admiration of their peers, they gradually withdraw from front-line practice.

Changes in the field of environmental aesthetics can be linked to the following concepts: (a) new methods of data collection (e.g., semantic differential or Q-sorting) and (b) advanced tools for statistical analysis of the data, combined with the shift from on-site to laboratory studies, leading to abstraction and scientification of the field. As a result, research practice has become distanced from the complexity of the real world hidden behind anonymous surveys and factor analysis. This "withdrawal from disorders" (Abbott, 1981, p. 830) secures the status of the professional field but abandons the experts' public status.

2.3. Reconsidering Experts' Challenges

The abovementioned rhetoric and the shift from expert evaluations to general public preferences question the value of expertise and the professional voice in environmental aesthetics. In a more recent perspective, the context of professional practice has changed as well, from supporting decision-making or resolving public conflicts to tackling the challenges of rapid urbanization and densification of cities. Various actors and policies shape the cities of today, resulting in a disconnected and chaotic urban environment with a sensory and information overload. With the ongoing scientification of environmental aesthetics, there is a more evident gap between the complexity of real life settings and the distanced research methods relying on photographs rather than physical stimuli, and on aggregated data rather than particular responses (see, e.g., Lindal & Hartig, 2013; Motoyama & Hanyu, 2014; Valtchanov & Ellard, 2015). A more informed understanding of how urban space is experienced could bridge this gap and bring the expert back to the forefront of research practice in environmental aesthetics.

However, the capacity of professionals to explicate aesthetic responses is limited by several issues. The first limitation concerns the communication of knowledge—the inability to articulate reasoning behind expert judgements. In most cases, visual complexity of a landscape is implicitly converted into formal design parameters (Daniel, 2001, p. 268) and therefore is not open to questioning. Second, the notion of "scenic beauty," as widely used

in the research and practice of environmental aesthetics, focuses on quantitative interpretation of aesthetic response and narrows it down to hedonic value or preference. The term *scenic beauty* emerged from the scenic beauty estimation method, formulated by Daniel and Boster (1976) for the US Forest Service to provide quantitative measures of aesthetic preferences of public forests and wild lands and to facilitate decision-making (Figure 1). As mentioned by Ribe (1982), "Simply 'scenic beauty' . . . is the one in which most visual assessors are principally interested in, as opposed to the entirety of aesthetic quality" (p. 66). Neither judgements nor preferences per se are useful for understanding the complexity of *aesthetic experience*.

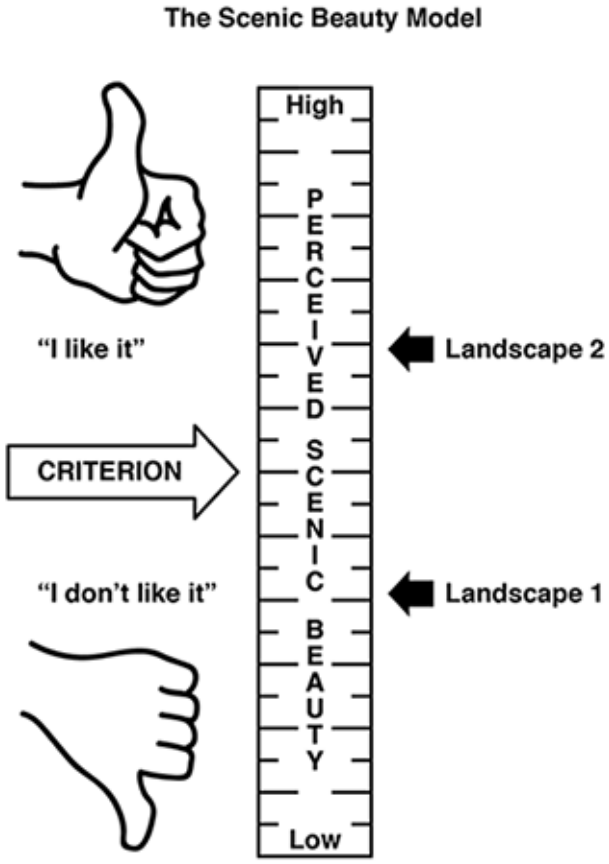

Figure 1. The scenic beauty model (adapted from Daniel & Boster, 1976, p. 14).

In light of these issues, it is interesting to see if professionals can explicate intuitive processes that stand behind their judgements of environmental scenes in order to adopt a wider concept of aesthetic experience in urban space as a unit of analysis. This represents a serious challenge, since aesthetic experience is an all-encompassing notion. Originated in the pragmatic tradition of philosophy, it is closely connected with everyday life and can include any experience beyond art. According to Dewey (1934), experience occurs continuously as a consequence of "the interaction of live creature and environing conditions" (p. 36), while anything "framed for enjoyed receptive perception" can be considered aesthetic (p. 49).

Aesthetic experiences can be studied from the standpoint of phenomenology, however, it is not clear how to trace their occurrences in urban space, nor what unit of observation should be used in the context of environmental aesthetics. The following section elaborates an approach where a specific research setting is created to study aesthetic experiences. In this approach, intuitive responses to such experiences are taken as the empirical material for the study.

3. Method

A specific research setting had to be created in order to study the intuitive knowledge of experts, in relation to their aesthetic experience of environment. The research setting was conceived by integrating two sets of ideas: those on tacit knowledge and aesthetic engagement. The research design involved a combination of observation, drawing, and reflection-on-action, deployed in two empirical contexts, treated as two cases. The first is a documentary video from 1958 which shows four Disney artists observing and drawing the same tree with an attempt to understand its character and the nature of their aesthetic appreciation. The second case describes an observational drawing session by the author in one district of the Helsinki metropolitan area in 2014.

3.1. Tacit Knowledge

The nature of knowledge that professionals apply to make sense of their aesthetic responses and translate them into judgement is tacit. Introduced by Polanyi (1966), the concept of tacit knowledge is closely related to intuition and acknowledged in the field of practice-led research where artists and designers look at their creative process through personal experiences which are out of reach for an outsider (Mäkelä, Nimkulrat, Dash, & Nsenga, 2011; Groth, Mäkelä, & Seitamaa-Hakkarainen, 2015). In practice-led research, documentation of the research process is a crucial aspect to make artistic practice observable and reportable (Mäkelä et al., 2011). Reflection is another method of making sense of tacit knowledge. Schön's (1983) reflection-in-action is a useful concept to study tacit assumptions behind experts' judgements.

Situations in which the tacit knowledge of experts in environmental aesthetics can be studied are difficult to define. Traditionally, professional expertise in aesthetics is associated with the Kantian concept of *disinterestedness*, where experts act as distant viewers whose judgements are devoid of personal involvement. In contrast to making a judgement, having an experience implies an active engagement, as elaborated below.

3.2. Aesthetic Engagement

Although there is virtually no limit to what can become a source of aesthetic experience, it has a number of characteristic qualities. One of the most important qualities is its active aspect: the viewer does not simply perceive environmental stimuli, but experiences them with vivid awareness, with sense-giving consciousness by which meanings are assigned to events (Haworth, 1986). Berleant elaborates the active aspect of experience in terms of engagement: "Aesthetic engagement involves active participation in the appreciative process, sometimes by overt physical action but always by creative perceptual

involvement" (Berleant, 2013). He argues that anything experienced by an aware body with sensory directness and immediate significance has an aesthetic element (Berleant, 1995, p. 10).

Combined together, the concept of tacit knowledge and that of engagement point towards the following conditions that should occur in order to study experts' intuitive reasoning in relation to aesthetic experience of environment:

(a) An expert should be actively engaged in the situation that he or she investigates rather than being distant from it or disinterested in it.

(b) Documenting and reflecting on experiences should be made possible.

3.3. Observation and Drawing

The conditions described above have led to an on-site investigation instead of a laboratory study. However, simply being on-site does not create the state of active engagement or awareness if it is based solely on observation. According to Relph (1979), observation can take place in two ways: (a) the casual way people look and register everyday stimuli and (b) the attentive "seeing with the soul of the eye"—a term borrowed from John Ruskin. By the second mode of observation, Relph implies "insight based on clear observation and attention to the aesthetic properties of scenes" (Relph, 1979, p. 28). Relph's distinctions of casual and attentive observation can be associated with the concepts of passive and active vision. Recent studies (e.g., Findlay & Gilchrist, 2003) highlight the inadequacy of the passive vision approach and establish the active vision approach as a dominant paradigm in research.

Although observation can be characterized as an active process, in practice it is impossible to rely on visual attention mechanism for the present study: eye movements are highly unconscious and happen in a very short time span, causing a lack of time to allow meaningful reflections to emerge. Additionally, when visual information is processed, it is filtered by selective attention which can ignore important details, especially in response to complex environmental stimuli.

It is possible to overcome this limitation of observation by putting it in the context of another practice, for example, by combining observation with a creative practice of sketching, drawing, or painting of a given environment. This combination fits the requirements for the research settings in several ways: it creates a direct engagement with the situation observed, intensifies awareness of the perceived space, and at the same time takes enough time for meaningful reflections to emerge.

The idea of using drawing as a tool for visual analysis is not new and exists within a wider discourse on drawing as an activity that can stimulate creative thinking (Frascari, 2011; Smith, 2008) or facilitate problem-solving in the design process (Schön, 1983). Unwin (2007) discusses drawing as an analytical tool and acknowledges it as a medium for architects to study works of others. Similarly, Edward (2008) explores how freehand drawing can increase the capacity to understand the complexities of modern architecture by "focusing the mind upon aesthetic values" (p. 10). Jenkins (2013) positions drawing at

a "conjunction of thinking and learning" (p. 11) combining formal analysis with in-situ experience (p. 15). What these studies have in common is an attention to the practitioner's learning process rather than to generating new knowledge about the phenomena observed. Drawing is "a contribution of the mind" (Unwin, 2007, p. 101), something that leads to "a more informed, insightful, and rounded design process" (Jenkins, 2013, p. 16) and to the development of one's own design thinking through analytical sketching (Goffi, 2015).

A different position can be found in Lavoie (2007) who explores the potential of drawing as a distinct form of information gathering about a landscape. Chiavoni (2012) discusses the application of analytic observational drawing and argues that interpreting a city through drawing can make a major scientific contribution to our knowledge of places. For Chiavoni, drawing is a way to clarify not only the individual features of the environment but also the relationship that links them together: "The gesture of drawing, whether it involves digital or traditional methods, continues to be an irreplaceable tool of critical research, and one which is fundamental in grasping and recording the complexity of urban spaces" (Chiavoni, 2012, p. 465).

In the same manner, Dutoit (2007) perceives drawing as a part of on-site investigation that gathers soft data (e.g., experience, use, activities) and depicts the character of places. For her, drawing practice supports the exploration of a wider range of urban experience and factors that influence it:"Drawing allows us at least momentarily to disengage from making distinctions between 'good' and 'bad,' and from evaluating the place as a whole before understanding the pieces" (Dutoit, 2007, p. 314).

To summarize, drawing acts as a way to actively engage an observer in an attentive and conscious exploration of the surrounding space, leading to an aesthetic experience. As a form of an immersive on-site investigation, drawing can rely on a wide range of techniques and tools not limited to pencils and paper: rough sketch, painting, collage, or other means can be utilized as well. To capture insights emerging during the drawing process, reflection on the action is needed, "to make a description of the tacit knowing implicit in them" (Schön, 1987, p. 25). When reflection-in-action is not possible, the drawing process can be video-recorded and used as stimulus material for reflection-on-action, a process of making sense of an action after it has occurred (Eraut, 1995, p. 16).

4. Case Studies

Two cases are presented here, to illustrate how the practice of painting or drawing combined with reflection-on-action can provide a way to access tacit knowledge relating to the nature of aesthetic experience. The cases were chosen because they provided useful units of observation for understanding complex aesthetic responses to environmental settings. In the first case, the artists took part in the outdoor painting exercise with the conditions necessary for active engagement with the environment and, therefore, for having an aesthetic experience. In the second case, observational drawing at the site of investigation was specifically selected as a method to study ambiguous aesthetic experience. Because of the contextual differences, no comparison is made between the cases.

4.1. Case #1: Four Artists Painting One Tree

The first case is based on a documentary film, *4 Artists Painting 1 Tree* (Jackson & Nichols, 1958) produced by Walt Disney Productions in 1958. In the documentary, four Disney studio artists, Walt Peregoy, Josh Meador, Eyvind Earle, and Marc Davis engaged in painting an oak tree in Burbank, California. The documentary had an educational purpose: it revealed how illustrators may collaborate despite having different individual styles. Davis was one of the Disney's original *Nine Old Men*, responsible for the design of many female Disney characters (Canemaker, 2001). Earle and Meador were Disney animators who produced their own critically acclaimed work (Pugh & Aronstein, 2012, p. 196). Peregoy's work was referred as "edgy and biting" (Ghez, 2011, p. 257), even "too sharp, too dark, too angry" for Disney's audience (Ghez, 2011, p. 258). In the first part of the documentary, four illustrators collaborated in creating the graphic elements for the *Sleeping Beauty* animation, adjusting their drawings in order to achieve a stylistic unity. The second part demonstrated how the illustrators could maintain their artistic identities outside of the work environment by comparing their approach to an outdoor painting exercise.

The events happening in the documentary were not made up artificially and were part of the paint-out programme in which Disney artists were encouraged "to stretch their skills and creativity" by occasionally leaving their offices to spend a day every month or so, to paint landscapes. The programme was an addition to the weekly indoors drawing and painting workshop started in the 1970s where artists could practise painting from live models (Ghez, 2010, p. 397).

In the second part of the documentary, where the outdoor drawing exercise is shown, the four artists present their individual reflective accounts of the aesthetic experience. These reflective accounts were transcribed and images of the artworks were added to the transcript to form the material for the case (Figure 2). The data were analysed to identify the aspects which define the aesthetic experience of the observed setting. In addition to that, two questions were raised: (a) how the artists used language to communicate their aesthetic experiences and (b) how the setting of the "experiment" contributed to accessing their intuitive knowledge.

Artists

Walt Peregoy

The thing that impresses me most is that this tree is a marvellous piece of engineering. It's a structure, and I'm going to try to reproduce it graphically. Strong straightening lines will build architectural patterns for me. I can see the tree building itself on my board like a skyscraper. I'm even more reminded of a skyscraper when I study the lower horizontal branches. They are very much like steel girders, designed for tremendous stress and strength. Only a strong geometric interpretation can do justice to this terrific strength. Now, when I look at this tree as architecture, the others see it differently.

In this stage of the operation, I'm smoothing in my colour areas with a palette knife. I'm still sticking very closely to my original conception. I still look at my tree from an architectural standpoint. As I feel these areas in, I have to be very careful to keep it simple. It would ruin my basic design if I were to go in for too much of ornamentation.

Josh Meador

The ancient druids believed the trees were inhabited by spirits. I'm no druid, but I can see how they could have gotten the idea. This tree is certainly a living thing, full of personality. I feel that I've got to work very fast if I want to capture my first impression of all this tremendous vitality and life. So I'm applying these black ink strokes with my biggest brush and I'm using a very thin mixture of oil paint and lighter fluid. I use lighter fluid because it dries fast. I see this tree as a living personality.

I've gotten to the point where I have rubbed in the main areas of the tree. And now I'm going to leave off using my brushes. From here on I'm going to apply the paint with one of my palette knives. These knives are generally used for scraping paint off the palette, but I think they're fine for applying the paint to the canvas. Working this way, I don't mix the colours thoroughly on the palette, but let them mingle as I spread them on the canvas. It is my way of suggesting movement: careful, precise mixing of colours would kill all the life in it for me. I can say that putting a background is very important: I can't think about painting this whole tree without putting him in his proper surroundings — the life and landscape he dominates.

Eyvind Earle

I see in this tree all the richness and variety that can be found in nature. I'm not going to paint the whole tree — what I'm looking for is contained in the trunk as much as in any part of this tree. I intend to make a very detailed study of the tree truck. In fact, you might call it a portrait of a tree trunk. I'm working with casein — a watercolour type of paint. I find this medium ideal for working in fine detail. Of course the first step is pretty rough. What I'm delineating here are the outside lines of the trunk. This will establish the silhouette or outside shape of what I'm painting.

Here now I've established the rough outline and the form of my tree trunk. And now I'm refining the form. I'm establishing directional lines that give movement and added form as well as the beginning of texture. Before I'm through, I mean to capture the texture of this tree trunk: the infinite detail within detail, the bark like a rich filigree, like ancient embroidered tapestries.

Now I'm at the point I enjoy the most: that of creating on the surface of my painting, to the ultimate of my capacity, the rich narrowed [...] surface of the twisted massive trunk.

Marc Davis

There are several things that interest me in this oak tree: first, I like its growth patterns and its bony structure. It seems to burst right out of the ground. I'm trying to suggest this explosive force with an arrangement of lines that reach upward and outward. I'm doing this preliminary drawing with charcoal and I'm working on light-grey paper.

Another thing that is interesting to me about this tree is its three-dimensional quality. To bring this out, I'm painting these branches in black. The importance of this dimensional problem influences the choice of medium I work in. I'm using the grey paper background as a middle value. This permits me to use black to make some of the branches arbitrary seen. Later on you will see how I use white to make other branches seem to come forward. Of course, I can't put the close branches until I finish the rest of these distant ones.

Now my picture is nearing completion. I'm putting in the white which is intended to make certain areas come forward. However, the mere ability to move elements either forward or backward in the picture plain is not enough: there must be good design. Consequently, I've been very selective about which branches I have chosen to make important, or subdue, or eliminate entirely. What I'm trying to do is to take what nature has put for me, and reorganise it into its most decorative aspect.

Figure 2. Artists' reflections in Disney's documentary, *4 Artists Paint 1 Tree*, transcribed by the author.

All the four experts referred to different aspects of the natural scenery that guided their aesthetic experience. For Walt Peregoy, it was the strong engineering-like structure of the tree. While Josh Meador noticed the "tremendous vitality and life," Eyvind Earle was captivated by the complexity of the particular elements of the tree—its trunk and texture of the branches. Marc Davis observed the growth patterns and three-dimensionality that the tree possesses. All of these aspects (structure, dynamics, complexity, and form articulation) are formal qualities associated with aesthetic values (Daniel, 2001; Nasar, 1997).

The use of the language was characterized by a pattern of applying metaphors to articulate the qualities of the setting that contributed to aesthetic experience. These metaphoric references illustrate how experts may become aware of certain aesthetic qualities by attending to their past experiences where similar aesthetic values were demonstrated:

> I can see the tree building itself on my board like a skyscraper. (Walt Peregoy, referring to structure)
> This tree is like a living thing, full of personality. (Josh Meador, referring to dynamics)
> The infinite detail within detail, like ancient embroidered tapestries. (Marc Davis, referring to complexity)
> It seems to burst right out of the ground. (Eyvind Earle, referring to form articulation)

When a metaphor became a guiding principle for executing the artwork, it focused the artist's attention on a particular aesthetic quality and omitted others. This happened to Peregoy, who from the very start decided to represent a tree as a piece of engineered artefact by emphasizing its structure and geometry:"The thing that impresses me most is that this tree is a marvelous piece of engineering. It's a structure, and I'm going to try to reproduce it graphically." He continued to develop this idea throughout the whole work:"I can see the tree building itself on my board like a skyscraper. I'm even more reminded of a skyscraper when I study the lower horizontal branches." In the later stage of his painting, Peregoy consciously limited his technique to stick to the vision of the tree outlined in the beginning:"It would ruin my basic design if I were to go in for too much of ornamentation."

Peregoy's final artwork was a stylized geometric interpretation of the tree. Guided by his original idea, Peregoy directed his attention to the qualities of the tree that helped him create an expressive outcome omitting other qualities that might have also contributed to his aesthetic response. This example suggests that in order to capture a holistic experience during the drawing process, it is important to embrace the ambiguity and complexity of the observed phenomena and avoid stylizing, simplifying, or following metaphors that restrict the qualities observed.

4.2. Case #2: One Person Drawing a Landscape

The second case is based on the author's own work, where she applied observational drawing as a research setting for understanding aesthetic responses to environmental stimuli. In this, she focused on a part of the outdoor space located in an urban area in

Otaniemi, a district of the city of Espoo located in the Helsinki Metropolitan area in Finland.

The main reason for choosing this site was the ambiguity of aesthetic responses expressed in relation to the area. Otaniemi is a relatively remote district from both Helsinki and Espoo city centres. Built in the 1950s as an Olympic village, it has later been transformed into a centre for higher education and currently hosts a campus of Aalto University. The appearance of the district is characterized by homogeneity of red-brick buildings and forests, but at the same time the district is associated with the name of Alvar Aalto who designed the general plan of the area and some of the buildings. The contradiction between the acknowledged heritage value and the perceived monotony of the landscape leads to a discrepancy of attitudes which creates an interesting context for the study.

The drawing session discussed here was a part of a broader research project. The project included multiple methods of data collection: photo elicitation and filling in a pre-designed form, besides the observational drawing session (Kholina, 2014). For the present case, only data from the drawing session are relevant because other data were mainly visual and lacked the descriptive component necessary to explore tacit assumptions behind aesthetic responses.

The drawing session was arranged in a setting representing a typical landscape of the area: red-brick buildings surrounded by a pine forest (Figure 3). This choice was guided by an intention to avoid any direct contact with the buildings that belong to cultural heritage and therefore can impose a pre-defined view on aesthetic values of the landscape. Drawing tools were specially selected to shift attention from the output to the process: the surface was covered with a black paint imitating a chalk board, and coloured pastel chalks were used for sketching, giving room for corrections and flexibility during the drawing process. The size of the "canvas" was intentionally larger than that used in typical outdoor drawing practice, partly due to the size of the chalk's stroke. The large canvas also allowed the use of the hands in the drawing process, activating bodily engagement (Figure 4).

Figure 3. A site of investigation (Otaniemi, Espoo, Finland).

Figure 4. Chalkboard used for the drawing.

The data were collected in two stages. First, a 40-minute drawing session was conducted and video recorded at the site of investigation. Second, the author watched the video and commented on the drawing process as it took place. The comments explicated a subjective rationale for the actions and decisions, producing a reflective account of the drawing process. The video recording and the transcript of the reflective account were analysed to identify insights about the ambiguous nature of aesthetic responses experienced by the author.

In the drawing (Figure 5), different techniques were used to picture building and forested areas. While the man-made elements were depicted in a realistic manner following the three-point perspective projection, the dense forested areas were shown graphically as a combination of different lines and colours, pointing towards the complex yet the visually engaging character of the forest.

Figure 5. Outcome of the drawing session.

Reflective comments referred to this difference in representation as highlighting the sharp contrast between the buildings and the forest areas, not only in visual sense, but also in terms of perceived functions: the forested areas are completely deprived of any affordances for human activity and act as dividers between buildings.

Combined together, the drawing and the reflective comments suggested that the aesthetic experience has indeed an ambiguous nature, because of not only the tension between the culturally valued and regular buildings, but also the way the natural elements are treated. The engaging visual character of the forested areas confronted the distanced attitude to their functions, isolating them from the common context and causing a fragmented perception of the area where homogenous man-made elements dominate.

Here the research setting served to capture the intuitive experience of the space and generate an insight into its character. It clarified the ambiguous character of the space, which led to an explanation of the critical attitude towards the urban area where it was situated.

5. Discussion

The approach of the study adapts a wider concept of aesthetic experience in urban space as a unit of analysis and conceptualizes a specific research setting to study aesthetic responses in an empirical context. The setting combines active engagement, a defining quality of aesthetic experience, with reflection-on-action which facilitates an access to intuitive reasoning behind expert judgements. The state of active engagement is achieved by the practice of observational drawing at the site of investigation which is video recorded and used as a stimulus for a reflective account. The analysis of the produced

outputs can reveal insights about the aesthetic values of the observed space which cannot be explicated with the help of preferences or judgements (Figure 6).

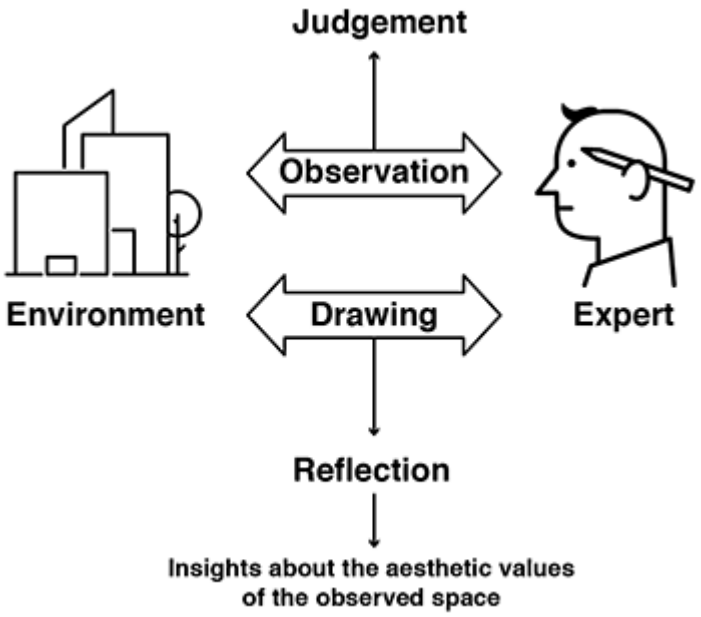

Figure 6. The approach of the study combining active engagement (observation and drawing) with reflection-on-action that facilitates an access to intuitive reasoning behind expert judgements of the aesthetic values of an environment. (Icons by Christian Wad and khaleel, retrieved from the Noun Project)

From the study of the two cases, some critical issues have emerged. First, the analysis has indicated that the drawing process can be influenced by a variety of preconceived aspects. In the Disney documentary, Walt Peregoy's focus on the metaphor of a skyscraper narrowed the scope of the aesthetic qualities he was noticing. In the on-site exploration of the Otaniemi area, the knowledge of the historical value of the buildings could influence the perceived aesthetic character of the space. To reduce the effect of preconceptions on the result, the initial perspective of doubt and accepting the ambiguity of the experience is found to be useful. Although this view is not typical for artistic practice where a vision of the creative outcome often guides the creative process, it was adapted in this case to shift the focus from the outcome to the process of the practice and to turn drawing into an investigative tool.

The second issue concerns the contextual limits of empirical data. The above two cases illustrate a form of research practice for accessing tacit knowledge through the combination of drawing and reflection-on-action. The insights into the cases relate to the specific content from where they emerge and may not be generalized to other situations. However, the approach itself can be applied to other situations.

The third issue is probably the most important in the context of the present study: in light of the proposed approach that highlights intuitive knowledge, drawing, and reflection, who are the experts that are capable of utilizing it? According to Ribe (1982), everyone has an internal aesthetic sensitivity towards environment and therefore can act as an expert. However, Polanyi's original concept implies that there is a functional relation between the two terms of tacit knowing (i.e., the proximal term, which includes the particulars of a situation and the distal term, which is the comprehensive meaning of the proximal term vis-à-vis a range of situations). He clarifies: "we know the first term only by relying on our awareness of it for attending to the second" (Polanyi, 1966, p. 10). It means that to be able to explore the tacit nature of aesthetic judgements, one should have a previous experience of dealing with aesthetic values and, additionally, sufficient skill in drawing, painting, or sketching to be engaged in this activity without conscious effort. These requirements narrow down the circle of potential experts from the general population to a wide spectrum of specialists, including artists, designers, architects, and representatives of other creative fields.

6. Conclusion

The article has focused on the issue of expertise in the field of environmental aesthetics, tracing its development and decline in a wider context of discourse on professions in Western society. It has reviewed several subfields of research and identified possibilities of explicating the tacit process of expert judgements and addressing a wider concept of aesthetic experience by means of professional expertise.

Based on the literature review, an approach that relies on active engagement and reflection has been outlined and elaborated through the combination of observational drawing and reflection-on-action. The approach has been illustrated in two contextually different empirical cases, demonstrating the possibility of generating insights about the nature of aesthetic experience at the site of investigation. Two main themes have been discussed in the article:

(a) First, studying intuitive processes behind expert judgements provides a way to articulate aesthetic experiences that cannot be communicated through judgements or described with formal criteria. Instead of aggregating the ambiguity of aesthetic responses into a simplified hedonic variable, this approach embraces the ambiguity and helps to express the complexity of attitudes towards the environment, as shown in the second case.

(b) Second, combining observation with the practice of drawing as a setting for an active and reflective engagement with the environment helps to capture the complexity of aesthetic responses.

In the context of this research, drawing practice plays a special role. First, it is used to direct attention rather than to support an individual's learning process or to enhance imaginative capacities. Second, drawing is combined with reflection-on-action which articulates intuitive experiences. This implies that drawing itself is not an analytical and investigative tool, but in combination with reflection-on-action it can lead to an informed

understanding of aesthetic responses. In this regard, it can be linked with the concepts of drawing as consciousness and visual intelligence that according to Ionascu and Rohr (2016) is relevant to contemporary drawing research.

Regarding the discrepancies between expert judgement and public preference, the article has suggested reconsidering and widening the profile of the expert who can utilize the research setting to produce meaningful insights into the aesthetic experience of an environment. This idea refers to the paradigm of socially distributed knowledge that blurs the divide between experts and lay public as well as between the users and producers of knowledge (Nowotny, 1999, 2000). The concept of socially distributed knowledge also helps to reconsider the notion of reliability in relation to the approach and research setting described in the article: "Reliable knowledge, although it will remain a solid criteria to strive for, will be tested not in the abstract, but under very concrete and local circumstances" (Nowotny, 1999, p. 14). This is precisely what the two cases described in this paper illustrate.

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