

# Visual methods for social and cultural airport research.

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## EXECUTIVE SUMMARY

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This report examines the use of still, moving, and 3D images and visualisations for investigation into the social and cultural role of airports. The potential to use these methods to help people remember, connect to, and visualise these social and cultural spaces of the past, present, and future is explored.

It follows on from work conducted as part of the SPARA 2020 project Work Package 7 activities which involved: qualitative research on the social and cultural importance of peripheral and remote airports; production of best practice templates for airport engagement with community stakeholders; and development of engagement strategies for case study airports.

This report details the results of a literature search into visual methods and critically reflects upon the use of visual methods (specifically photo elicitation) in remote and rural airport contexts. This literature review: gives an overview of visual methods; details how they are used and applied in various fields; discusses research which uses different types of visuals (still, moving, and 3D); engages in a critical discussion of visual methods including advantages and ethical considerations; examines the potential for visual methods to engage with community stakeholders in social and cultural research; and examines the potential for visual methods to be used in airport and transport research more specifically.

The report also reflects on the earlier SPARA 2020 research which employed the photo elicitation visual methodology and discusses the role this visual method played in the project. It also draws upon the findings of an earlier photo elicitation study which examined the social and cultural role of the main street in remote and peripheral areas.

Although the report details examples from a wide variety of airports of differing sizes, the implications for socially and culturally significant remote and peripheral airports are explored in more detail, in line with the scope of the SPARA 2020 project. As such, this report will be of interest to: those working at remote and peripheral airports who wish to engage in community stakeholder engagement (especially where they are being asked to evidence non-economic impact to funding bodies); and visual researchers (especially those who study community spaces).

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# 1 INTRODUCTION

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This report follows-on from a study during 2015-2016 as part of the SPARA 2020 project, which established that peripheral, remote and small airports are regarded as socially and culturally important to the communities they serve (Bloice et al, 2017). Further work as part of the SPARA project in 2016 established means and methods for airports to engage with these important local community stakeholders (see guideline documents produced by Grinnall, 2017).

The majority of airports in the EU are small and regional and only 58% are profit-making (European Commission, 2014). However, the study as part of the SPARA 2020 project found that small, remote and peripheral airports: contributed to local history and heritage; enabled local employment; allowed for serendipitous social interactions; provided lifeline services; and had non-aeronautical uses beyond travel (Bloice et al, 2017).

As part of this earlier research, the team employed visual methodology (photo elicitation, or photo interviewing specifically) to garner thoughts, memories and opinions about the local airport from a number of communities. This was felt to be an effective method of gathering data, especially when compared with the focus group approach which ran simultaneously and was less successful (Bloice et al, 2017). The photo elicitation method was also employed successfully in earlier research work into the social and cultural role of the main street in remote and rural towns (Baxter et al, 2015). The research team at Robert Gordon University had secured additional (reallocated) funding from the SPARA 2020 project to undertake some desk-based research into the use of visual methods for engaging with airport community stakeholders, and this report outlines the results of that work.

What follows is reporting of a literature review into visual methods in social and cultural research more generally, and a discussion of how these methods could be applied to the airport community stakeholder setting. This report will attempt to provide an overview of the field, but acknowledges that all aspects of visual methods and visual sociology cannot be covered within the scope of this report.

It is perhaps helpful at this point to summarise the definitions and applications of visual methodologies here, along with some of the criticism before going into the literature review section. Wider definitions of visual methodologies are built upon:

“the idea that valid scientific insight in society can be acquired by observing, analysing, and theorizing its visual manifestations: behaviour of people and material products of culture”

(Pauwels, 2011, p 3).

Banks (2001, p ix) simply describes visual sociology as “the use of visual materials . . . employed by a social researcher during the course of an investigation”. There is a dizzying array of methods, tools, types and sources of visual methods, but the general idea is that that there are visuals which provide a greater insight into our society and culture.

Rose describes visual research methods as:

“methods which use visual materials of some kind as part of the process of generating evidence in order to explore research questions. These methods are diverse, and their diversity inheres in both the sorts of visual materials they work with, and in the procedures to which those materials are subjected. Most recent studies deploying visual research methods have used photographs of one kind or another”

(Rose 2014 p25)

It is said that there has been a rise in use of and interest in visual methods in social and cultural research (Pauwels, 2011; Clark, 2017) and that increasingly, these techniques are being used to investigate “socially and spatially situated relations” (Clark, 2017, p1).

However, despite the rise of the method over the last two decades and the emergence of dedicated journals and textbooks on the subject, many social scientists were said to be unaware of the potential of visual methods, and there was a lack of integration of findings and practices and consistency of terminology across and between fields (Pauwels, 2011).

There has also been some debate over what is ‘the right way’ to do visual research (Pauwels, 2011) and it has been noted that there is a ‘darker side’ to visual research, largely to do with competing ideologies and ‘fighting’ between fields about who does visual research the ‘right way’ (Prosser, 2008).

Pauwels attempted to redress this by proposing a framework which is built around three themes: origin and nature of visuals; research focus and design; and format and purpose. The framework highlights the broad range of methods, origins, subjects and techniques employed by visual researchers. Within this framework, it is posited that visual research can involve either pre-existing visual artefacts or ‘found’ visuals or those which have been created by or for the research termed “researcher instigated visuals” (Pauwels, 2011, p5).

There are a number of advantages and disadvantages to each type of visual depending upon the context of the research (Pauwels, 2011). For example, use of found visuals restricts researcher to visual materials which already exist and thus, this may limit the research that can be undertaken. However, researcher instigated visuals can lead to researcher bias. For example, consider the difference between interviews conducted with participants using found photos of their local airport versus giving the participants a camera each and asking them to record the impact of the airport on their community, and then interviewing them about their photos and/or presenting the photos in the research (a technique termed ‘photovoice’). Pain (2012) approached visual methods as tools and sought to uncover researcher reasoning for choosing them, in contrast to Pauwels approach which focused on

the visuals themselves and how they are conceptualised, collected and analysed (Pauwels, 2011; Pain 2012).

As mentioned, visual methods can be used in a variety of ways, but most often as either a data collection technique or as a dissemination technique. The advantage of the methodology in the first case, is that it allows participants to communicate more effectively with the researcher, and in the second case, that it helps to communicate the outcomes of the research (Coemans and Hannes, 2017).

Visual methods can play a key role in the research process and can be incorporated into the research in many different ways. Weber (2008, p47) breaks these down into five main areas of use: images can be produced by participants as data; found or existing images can be used as data or springboards for theorizing; images and objects are useful to elicit or provoke other data; images can be used for feedback and documentation of the research process; and images are useful as a mode of interpretation and/or representation. There is also a trend for 'purpose made' visual objects such as maps, models or art (Hinthorne, L. L., & Simpson Reeves, L., 2015), which are often employed in developing societies, where language is a barrier, or where disadvantaged or vulnerable groups are participants.

One of the advantages, which will be explored in more detail in the literature review later in the report is the idea that visual methods move beyond the written word which is so prevalent in academic research. Prosser and Loxley (2008) describe how the "propensity qualitative and quantitative researchers' display to hurriedly translate empirical observations into words and numbers, reflecting an academic community focused resolutely on producing knowledge efficiently rather than effectively, is increasingly in question" (Prosser and Loxley, 2008, p4). They describe the move towards visual methods as a 'sea change' in response to "urgent, challenging and complex global research questions" (Prosser and Loxley, 2008, p4). They add that visual methods can: "provide an alternative to the hegemony of a word-and-number based academy; slow down observation and encourage deeper and more effective reflection on all things visual and visualisable; and with it enhance our understanding of sensory embodiment and communication, and hence reflect more fully the diversity of human experiences." (Prosser and Loxley, 2008, p4)

One of the main types of visual research discussed in this report, and the one which has perhaps the most application to the remote and peripheral airport context is photo elicitation. This method uses found or researcher instigated photos and it is "based on the simple idea of inserting a photograph into a research interview" (Harper, 2002, p13). There are a number of reasons why researchers adopt the photo elicitation method, but it is the power of the image to provoke a stronger response than words alone that is often mentioned. For example, it is said that:

"images evoke deeper elements of human consciousness than do words; exchanges based on words alone utilize less of the brain's capacity than do exchanges in which the brain is processing images as well as words"

This effect can also be extrapolated to other visual methodologies.

For the purposes of this work, the visual methods focused on here incorporate use of still images, moving images, and 3D images. There are a myriad of ways in which researchers use these methods to engage with research participants and they are used in a number of fields and for a variety of reasons, but the scope of this report is to highlight those which would be applicable to researching involving airport community stakeholders. As such, this report is not designed to be a comprehensive overview of the field over the last few decades, but instead makes reference to the major aspects of visual methods relevant to the SPARA 2020 context and to note some successful instances of employing visual methods.

The following literature review provides a more detailed overview of visual methods in social and cultural research, and discusses some methods using still images, moving images and 3D images. It is beyond the scope of this report to provide detailed descriptions of specific visual methods and how to analyse the data. As such, this report is intended only to be an overview of the topic, signposting further reading, and focuses on methods which could work well in the context of local airport stakeholder engagement.

## 2 LITERATURE REVIEW

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### 2.1 A SHORT HISTORY OF VISUAL METHODOLOGY DEVELOPMENT

A brief summary of the key periods, influences, and early seminal works are included as an historical overview in this section. For a very detailed account of the historical development of visual methodologies in social and cultural research, see Prosser and Loxley (2008). For a good summary of Visual Anthropology development more specifically, see Banks (2005).

“Over the last three decades qualitative researchers have given serious thought to using images with words to enhance understanding of the human condition. They encompass a wide range of forms including films, photographs, drawings, cartoons, graffiti, maps, diagrams, signs and symbols”

(Prosser, 2005, p1)

There is a tradition in Western society to deal in words and numbers, rather than to focus on the visual (Banks, 2001; Davey, 2019; Woolner et al 2009), and nowhere is this more prevalent than in academia where there is a veritable “a sea of words and more words, in which visually based communications are not taken as serious intellectual products” (Collier 2001, p.59).

However, there has been a ‘sea change’ largely due to our increasing focus on the visual in society and culture. As Prosser and Loxley note (2008, p6) we have, over the past few centuries, “enhanced our ability to ‘see’ and ‘represent’ and change our perceptions about and interactions with the material world” through inventions such as photography, film, and printing processes.

Prosser and Loxley (2008, p6) posit that visual anthropology and visual sociology played a “major role in shaping early empirical visual research” and that “like photography, sociology and anthropology were established in the middle of the nineteenth century and through the principle of reciprocity visual sociology and visual anthropology emerged”. Despite this, they assert that visual sociology ‘did not get off to a promising start’ and at the turn of the 20<sup>th</sup> century was regarded as lacking in scientific integrity.

However, in the late 1960s and 1970s, several seminal studies by visual sociologists initiated a “move away from traditional modes of observational studies to a more ‘seeing’ and ultimately a ‘perceiving’ form of visual sociology” (Prosser and Loxley, 2008, p 7). These studies used photography in a more critical and reflexive way with an awareness of the polysemous nature of photographs) but it was later, in the 1990s and early 2000s, when Wagner (2001) and Harper (1998) finally bridged the gap between “visual sociology’s application of documentary photography and contemporary studies of visual culture” (Prosser and Loxley, 2008, p7).

Early visual anthropology 'faired much better' according to Prosser and Loxley (2008, p7) where there are multiple examples of photography being used to 'record truth' and they suggest that works such as Franz Boas's 1894 study of people living in the North Pacific helped to normalise use of photography, or 'photo-fieldwork' in this field of research. Another example, this time in the use of moving imagery is Alfred Haddon's Torres Straits expedition in 1898 where film was used to "record events and rituals" (Prosser and Loxley, 2008, p7) in an effort to record fast disappearing cultures (Banks, 1998).

There was a shift from still images to moving images in visual anthropology after 1920, and "film as a medium subsequently became more central to visual anthropology...for many visual researchers ethnographic film has come to epitomise and symbolise what constitutes visual anthropology" (Prosser and Loxley, 2008, p7). However, despite the 'greater degree of respectability accorded to the visual in anthropology' issues around ethical use of images in research, concerns over manipulation of material, and the trustworthiness of the 'reality' they portray continue to be debated today (Prosser and Loxley, 2008, p8). In anthropology, "film as a 'neutral' agent which recorded predetermined meanings set by the researcher, gave way to engagement in and with participant's lives and the development emergent themes" (Prosser and Loxley, 2008).

Davey 2010 p345 found that historically, anthropologists had "based their work on written texts and verbal presentations such as lectures, and had overlooked the valuable contribution of a visual perspective" until the 1980s when "visual analysis was gradually recognized and accepted." Prosser and Loxley note that by the 1980s, there was "an intellectual tension existed between those who read 'found images' (cultural studies, visual culture) and social scientists who created images (visual sociologists and visual ethnographers)" (Prosser and Loxley, 2008, p9) and that nowadays, contemporary visual studies "as with all other approaches to research, are not without their critics".

## 2.2 ADVANTAGES OF VISUAL METHODOLOGY

Visual methodology adoption is often associated with a number of claims about how visual material and visual methodologies more generally are better tools for grasping the nuances and complexities of life than 'more conventional' (text and number-based) methods. (Clark, 2017, p1) "Visual methods 'seem' to be somehow better able to access the full range of sensorial, experiential, and phenomenological dimensions of social life" (Clark, 2017, p2)

In support of visual methods, some researchers also note the potential for a more 'inclusory' approach and would help to include participants in participatory research who may have had difficulty communicating using purely verbal or text-based methods (Clark, 2017).

In her literature review to examine the reasons for choosing visual methods, Pain found that the reasons researchers gave fell into two broad categories: "those principally related to enrichment of data collection or presentation and those concerning the relationship between participants and researchers." (Pain, 2012, p303). Clark, however, adds a third reason to the previous two: "stimulating the tacit knowledge of participants" (Clark, 2017, p1).

Pain found evidence of researchers using visual methods to enhance data collection and presentation for reasons such as: facilitating subconscious and tacit knowledge e.g. drawing or modelling which allows things to be expressed which would be repressed in verbal form or photo-elicitation to tap into practices which are subconscious or tacit; accessing the difficult to reach e.g. groups or places which are a challenge to engage in the research process otherwise; encouraging reflection e.g. through contemplation of the image or through photo-voice methods; and enhancing data collection and presentation e.g. through images and text coming together to present an enhanced meaning (Pain, 2012, p309). However, given the subjective nature of knowledge it has been difficult to substantiate these claims.

Additionally, Pain found evidence of researchers using visual methods to mediate between researcher and participant such as: allowing participants to become experts e.g. using participant generated images to enable their views, not the researchers' views; addressing issues of power e.g. to empower participants and to remove influence of researcher status, knowledge of cultural background; enabling collaboration e.g. active participation of the 'researched' parties; and effecting change, e.g. more positive attitude towards a particular aspect of life or a changed mood or outlook in participants (Pain, 2012, p311).

Banks and Vokes (2010, p341) note that the "transit of an image between the private and public (and vice versa) has the potential to rework the meanings which attach to it". They claim that it is a "banality to note that photographs reference (the passing of) time and invoke memory in their viewing" (Banks and Vokes, 2010, p342). However, Hinthorne & Simpson Reeves (2015) note that in line with research into photographic image-based methods, for modelling and mapping also, it was: "not the visual material itself... that was

significant, but how they could be used to enhance reflection and discussion” (Hinthorne & Simpson Reeves, 2015, p169). These tools, whether they be photographs, video, 3D representations or models, or objects, should be “seen as a starting point for communication – not as an end in themselves” (Hinthorne & Simpson Reeves, 2015, p172) and talk of an essential relationship between the visual and the spoken.

Pink’s view of the image is somewhere between the above two views:

“These practices involve producing, re-producing and locating images in specific social, materially and technologically situated contexts. Amateur photographs participate at the intersections between past, present and future, as they move between different place-events, perhaps playing rather different roles in each. Indeed, they are sometimes reproduced as they move between contexts as they are digitalised, projected, printed, photocopied or archived. The different types of digital and paper, sensorial and material, elements of photographic images and practices are important in terms of the types of embodied and affective engagements that people can have with them. But equally significant is how these might be combined in the production of specific types of engagement.”

(Pink, 2011a, p100)

In addition to the rise of interest in including the visual in research, is a rise in the use of arts-based materials. Weber lists a number of benefits of incorporating artistic images into research more specifically and argued that they:

“...can be used to capture the ineffable, the hard-to-put-into-words... can make us pay attention to things in new ways... are likely to be memorable... can be used to communicate more holistically, incorporating multiple layers, and evoking stories or questions... can enhance empathic understanding and generalisability... can carry theory elegantly and eloquently... encourage embodied knowledge... can be more accessible than most forms of academic discourse... can facilitate reflexivity in research design... can provoke action for social justice”

(Weber, 2008, p45)

This would suggest that incorporating the visual into research produces different results. Certainly, when Woolner et al examined claims that ‘visually mediated encounters’ differ from traditional research interviews in particular, they found that information produced using visual methods often do appear to be: “different from the results of traditional interviews” (Woolner et al, 2009, p10). However they also found that:

“Successful interviewing relies heavily on the relationship that is established by the researcher with the respondent, who must ensure that an authentic voice is heard and thus genuine data is collected. In the majority of interviews, the key to this relationship is the interaction (predominantly verbal) which occurs”

(Woolner et al, 2009, p2)

They argue that there is value in including visuals in research, but where images are merely tools for mediation, claims of greater involvement and inclusivity of participants in the research process are overstated. However, they recognise that there is potential for these visually mediated encounters to be more inclusive, “partly because methods which make more use of visual and spatial material, and are less demanding of literacy skills, may widen participation” (Woolner et al, 2009, p2).

On the topic of the power balance between researchers and participants, Miller notes that “in qualitative research, visual images provide a range of advantages, which include accessing the difficult to reach, sharing power with participants, facilitating communication, accessing difficult information to reach and drawing on different cognitive processes.” (Miller, 2015, p5). More recently, Shannon-Baker and Edwards (2018, p952), in their study of the ‘affordances and challenges’ when incorporating a visual element in a mixed methods approach found that although there were few examples of this research approach, visual methods’ inclusion expanded the “scope of traditional approaches to reach more diverse populations, encourage further analysis of data, and better address complex issues. The topic of ‘difficult to reach’ communities is dealt with in more detail in section 2.7.

### 2.3 ETHICAL ISSUES AND LIMITATIONS OF USING VISUAL METHODOLOGY

Despite a rise in popularity, there have been a number of researchers raising concerns about the use of visual methods. In particular, there is a “growing scepticism about the innovativeness of methodological claims” (Clark, 2017, p2) and visual researchers focus on the ‘way of looking’ rather than what they might be looking at (Clark, 2017).

As researchers began to use photography as a tool to record and as a topic of analysis, there was ethical debate, which still continues to this day, about the relationship between reality and the image in the photograph when used in visual studies of that time (Prosser and Loxley, 2008). There is a recognition that the term ‘image’ can “straddle both sides of ‘real-not real’” interpretations and this has implications for how we differentiate between what is happening in the natural world, how it is observed, how it is recorded, and how it is perceived and analysed by others (Weber, 2008, p43). Where images are meant to serve as representations of reality, they are still subject to the influence of the researcher or others, and serve only as an interpretation of fact. Some would argue that using images at all causes ethical problems in research, but others suggest that it is more to do with how they are used: how they are introduced into the research process and for what reason (Banks, 2001; Woolner 2009).

Jordan suggests that there is danger in researchers not understanding how visuals can be used in research, especially where they have been altered beyond the form of the ‘original’:

“Visual social research is a nuanced technologically sophisticated and evolving field. Dedicated to the exploration of social relations through images, visual social research engages researchers and participants in innovative methodological and technological work. Working ‘on the cutting edge’ has dangers, though, such as falling afoul of research integrity expectations... Technological and methodological innovations challenge codified rules and best practices training meaning that some scholars may be unaware that some forms of image management are impermissible in the context of academic research.”

(Jordan 2014 p443)

As mentioned in the previous section on the advantages of the visual method, use of imagery is often heralded as a means to communicate with research participants who are not verbally articulate, or with those who are harder to reach through conventional means. The problems this could mean for sampling is summed up by Prosser and Loxley:

“Visual sampling is another issue which requires special consideration. Is it possible that visual researchers choose the most able children to take photographs, involve articulate girls in photo-elicitation, allow noisy boys to dominate the use of digital technology because it is an easy and productive, if ultimately untrustworthy, option? Also, people with disabilities, especially those with intellectual impairment, are not usually represented in a sample of ‘normal’ people by non-visual researchers but nor are they likely to be asked to create images as part of a research project. Is this because of problems stemming from

researchers' own perceptions and thinking that people with disabilities are unable to produce 'good' or aesthetically pleasing images, because people with diminished ability would fail to fully understand notions of informed consent or the implications of their actions?"

(Prosser and Loxley, 2008, p52)

In her review of the reasons for choosing visual methods, Pain (2012) found evidence of researchers using visual methods because they are 'rapport building', however, she notes that the effectiveness of this method was seldom mentioned in the articles she reviewed. She also mentions that researchers report using visual methods to facilitate communication as: prompts; to explore abstract ideas; and as adjuncts to communication (Pain, 2012, p306). She notes that some researchers found that the visual methods did lend itself to the research, others didn't mention effectiveness at all, and some reported that adoption of visual methods saw no marked benefit (Pain, 2012, p307). She suggested that "some people will find a visual method more helpful than others" (Pain 2012, p307).

One disadvantage of using 'found' visual material is the need, or otherwise, to obtain informed consent of those individuals appearing in the photographs (Baxter et al 2015). While images held in archives and other repositories usually appear there with ownership information and details of how the visual materials can be used, modern images taken by researchers for example, come with no such permissions.

The ethics of filming or photographing in public spaces is a subject of debate in the visual research community (Prosser and Loxley, 2008; Prosser, Clark and Wiles, 2008) acknowledge the difficulties in gaining consent from every person in a crowded street, for example, but argue that "it would still be considered good practice to gain permission of those featured in the images" (Clark and Wiles, 2008, p13). However Harper argues that "harm to subjects is unlikely to occur from showing normal people doing normal things" and that "the public accepts that being in a public space makes one susceptible to public photography" (Harper, 2005, p759). Miller also argues that "anytime an individual enters a public space, there is a general risk of appearing in the background of a picture" (Miller, 2015, p8).

Issues around anonymity in visual research are particularly contested. In written research, participants' identities are protected by anonymising responses. It is difficult to do the same in visual research:

"There is strong agreement in word and number based research that researchers should protect the privacy of research subjects. Anonymity, traditionally (if problematically) assured through the use of pseudonyms is not possible in visual research"

(Prosser and Loxley, 2008, p54).

Certainly, in past projects, the RGU research team has made efforts to protect photograph subjects from "any obvious embarrassment or stress" when modern photographs have been

used as elicitation materials, and have taken a number of steps to mitigate harm including: examining the photographs carefully for anything which might cause objection; blanking-out vehicle registration numbers (especially where these vehicles were parked illegally); exclusion of photos which inadvertently including the drinking of alcohol (due to the public alcohol consumption laws); and removing photos to which any participant rejects strongly (Baxter et al 2015). Certainly, in the two previous photo elicitation studies by the writers, research participants were delighted to spot themselves, friends and relatives in the images and some even requested copies to take home (Baxter et al 2015; Bloice et al 2017).

The measures taken to mitigate the risks of identifying research participants taking part in visual studies can sometimes lead to more trouble, as in this anecdote from Haaken and O'Neill:

“Rather than a step in the research process, the negotiation of consent unfolded as participants made choices about the form of data and its uses. For example, most women expressed early on a concern with images of their faces appearing on YouTube or some other public site. One suggestion was to blur the women’s faces, or cast them in shadows. Although these effects fulfil an ethical obligation to participants, researchers also carry an ethical obligation to understand modes of reception in media culture. The blurred face and shadow effect circulate widely in crime genres as markers of deviance. Attempts to protect identity also carry unintended effects. With the aim of avoiding women’s faces and protecting privacy, the videographer kept the flip camera focused below the shoulders. At the end of the first day, we found that we had a rich trove of images of women’s breasts”  
(Haaken and O'Neill, 2014 p86)

With the technique employed by both Baxter et al 2015 and Bloice et al 2017 of not recording the interviews, comes questions around reliability of the data. It was felt that due to the informal and unstructured nature of the conversations elicited by the photographs, and the location of the photo exhibitions in noisy public areas, these circumstances “did not really lend themselves to the informants’ conversations being recorded digitally or on audiotape... it was believed that making audio recordings or manually taking fieldnotes during discussions would be something of a distraction and a barrier to informant participation in such a public place” (Baxter et al, 2015, p12).

In these cases, notes were written up immediately following each conversation, and one has to acknowledge that researchers’ memories are not infallible. As such, there was a balance to be struck between gaining the rich data from casual conversation and perhaps suffering from inaccurate recollections by the researcher, and more formal, recorded interviews which capture data accurately, but do not allow for the same kind of spontaneous engagement as the former method.

In his article on educational research, Miller points out that for many types of social and cultural research involving human subjects, it is difficult to pass through the ethical approval process, especially where, for example, permission is being sought to use visuals which

feature vulnerable individuals: “The lack of agreement about the ethical and moral issues associated with the use and presentation of photographic data has prevented the widespread use of this useful and valuable research method” (Miller, 2015, p3). Not only do ethics committees create barriers to this type of research being taken up more widely, but the peer review process through which most research work passes through in order to be published presents some additional difficulties when visual methods have been employed (Miller, 2015, p4). Prosser and Loxley also detail the difficulties in obtaining ethical approval for visual research (Prosser and Loxley, 2008).

Using a selection of ‘found’ visuals, researchers may find they gather unexpected responses to those they initially imagined when compiling the elicitation materials. For example Baxter et al found that photos selected to represent a certain aspect such as the social interactions in the image instead garnered responses about the building in the background and referred to the photographs as having a ‘polysemous’ nature (Baxter et al 2015). Prosser and Schwartz also encountered this phenomenon and cautioned that: “researchers are often clear about their intentions as they go about constructing a set of images to use in the course of the interviews, but they may just as often be surprised (pleasantly or disappointingly) by the nature of the responses their photographs generate.” (Prosser and Schwartz, 1998, p125)

Liebenberg also spoke of this phenomenon and advocated a close researcher-participant relationship to mitigate the potential for misunderstandings:

“this subjective nature of the meaning of images underscores the importance of researcher–participant interaction in the research process... As researcher and participant become collaborators in the construction of accounts and meanings, both personal and theoretical understandings of cultural realities are magnified... Understanding the multiple meanings of images offers the opportunity to reformulate the relationship between researcher and participant into a more mutual initiative.”

(Liebenberg, 2009, p5)

Pauwels cautions use of visual media in research, particularly as visual imagery can be interpreted in so many different ways and states that: “A great number of issues and misunderstandings regarding visual research can ultimately be related to particular views and misunderstandings with regard to the iconic, indexical, and symbolic properties of visual products and visual media, as they reside with producers, users, and approvers/sponsors of visual projects” (Pauwels, 2010, p573). He also draws attention to the: “stark contrast between the current surge of interest in exploring visual aspects of society by scholars from the humanities and the social and behavioral sciences and the relatively weak conceptual and methodical basis for realizing this interest in a more widely accepted manner” (Pauwels, 2010, p573).

Ruby argues that anthropology is perhaps better placed than other fields to rise to the challenges of incorporating the visual into research, given the extent of immersion in the topic of study:

“Anthropology has now joined visual studies, cultural studies, visual culture and media studies in an examination of the consequences of the production and use of pictures. The profession offers a perspective that is sometimes lacking in other fields, that is, an ethnographic or ethnohistorical approach that entails going into the field for an extended period of time to examine, participate and observe the social processes surrounding these visual objects”

(Ruby, 2006, p162)

In the introduction to their book on ethics and visual research methods, Warr et al (2016, p2) note that “visual research methods that offer new modes of private expression should elicit, if not anxiety, then conscientious attention to risks that are arguably heightened by the descriptive and explicatory potential of images”, and Haaken and O’Neill were particularly concerned by the use of photovoice and arts-based methods which:

“seek to humanize research findings and reduce social distance by enlisting images produced by participants themselves. But if a picture is thought to tell a 1000 words, it also masks a multitude of stories”

(Haaken and O’Neill, 2014, p84).

Finally, in their conference report on a symposium which explored the ‘ethical frontiers of visual research’, Howell et al 2014 note that:

“Visual research is a fast-growing interdisciplinary field that spans the social sciences, the arts and design, and to a certain extent the humanities. Broadly speaking, visual research takes as its object of study the interpretation of visual phenomena in human societies and the many ways that human subjects negotiate individual and shared meanings from visual experience and representation... [with a] focus on the representational, creative and socio-cultural dimensions of the visual”.

(Howell et al, 2014, p209)

They argue that adoption of visual methods requires negotiating ‘complex ethical terrain’ and the “digital technological explosion has also provided visual researchers with access to an increasingly diverse array of visual methodologies and tools that, far from being ethically neutral, require careful deliberation and planning for use” (p208).

So, while it would appear that visual methods have been gaining in popularity and have many advantages, there are a number of ethical and practical considerations when incorporating the image into a research design, and a researcher must be aware of and address these risks.

## 2.4 USING STILL IMAGES

Researchers in the social science field have been using photography-based research methods since Collier wrote about its use in visual anthropology in 1967 (Collier and Collier, 1986). As discussed in previous sections, an image can convey a powerful message, or can have multiple messages depending on the viewer. In other words: “What ‘looks like a picture’ is a societal as well as a personal construction” (Beilin, 2005, p59).

Indeed, as Margolis and Rowe note about their Postpositivist stance on the photographic image:

“photographs represent ‘things in the world.’ It recognizes that cameras are not simply mechanical transcription devices, and acknowledges that photographs result from photographers infusing their own perspectives and interpretations of subjects through decisions about framing and composition, by manipulating depth of field and exposure time, choosing when to release the shutter, etc.”

(Margolis and Rowe, 2011, p340)

The photo elicitation technique alluded to earlier was an important element of the previous SPARA 2020 research into the social and cultural role of peripheral and remote airports.

Prosser and Schwartz define the photo elicitation technique as:

“...a single or sets of photographs assembled by the researcher on the basis of prior analysis are selected with the assumption that the chosen images will have some significance for interviewees. The photographs are shown to individuals or groups with the express aim of exploring participants’ values, beliefs, attitudes and meanings, and in order to trigger memories, or to explore group dynamics or systems.”

(Prosser and Schwartz, 1998 p124).

Photo elicitation as a method has historically been considered as ‘fairly marginal’ in most mainstream research, but as Lapenta notes, it has more recently:

“gained broader recognition for its heuristic and collaborative potential. Indeed, it is becoming an established element in the methodological toolbox of the visual anthropologist or sociologist and is increasingly popular in a range of interdisciplinary research studies. Photo-elicitation has been used in a widening range of research designs and anthropological subjects such as studies of social class or organization, family, community and historical ethnography, or identity and cultural studies”.

(Lapenta, 2011, p202)

In his paper which addresses the concerns and justifying the benefits of photography as a research method, Miller refers to photography as “an important tool for researchers to learn about the contextualised lives of individuals” (Miller, 2015, p1). This would be especially relevant where the photos involved were taken by the participants. Warner et al

call this 'PEI', or: "respondent controlled photo elicitation interviewing where participants take their own photos and discuss them later with researchers" (Warner et al, 2016, p1).

It is important to distinguish between photo elicitation interviewing and another visual technique known as photovoice, which also involves participant photos. As described by Warner:

"While PEI and photovoice are often conflated, they are in fact separate techniques. PEI, involves photographs and subsequent interviews individualised for the particular study, photovoice is a more community-based approach and as such is more participatory".

(Warner et al, 2016, p2)

Harper regards historical photographs in particular as useful in stirring "ethnographic memory" (Harper 1998 p35). Baxter et al 2015 also describe how historical photographs can be used to obtain "rich, detailed, qualitative data" and "as a technique which can aid the rapport between researcher and interviewee" (Baxter et al 2015, p17 and p2). As discussed in previous sections, there is a general consensus that using photos in interviews especially can lead to a different (if not enhanced) data set. Certainly Miller found that: "photographs evoked emotions and information that did not emerge from my interview script" (Miller, 2015, p2).

Particularly for social and cultural research, photographs can be excellent tools, both the physical objects themselves and the content. Edwards, describes them as having a 'relational quality' which occupies "the spaces between people and people and people and things" (Edwards, 2005, p27) and goes on to describe them as:

"socially salient objects and tactile, sensorially engaged objects that exist in time and space and thus in social and cultural experience. As such, they operate not only at a visual level but become absorbed into other ways of telling history"

(Edwards, 2005, p27)

Edwards also notes that "loose photos induce perhaps a freer narrative, for albums structure time and space, retemporalize and guide narratives" (Edwards, 2005, p34. The current authors have conducted research which used both structured photo exhibitions, which were designed around a theme, and focus groups and one-to-one interviews which often featured piles of photographs brought to the sessions by the researchers themselves, or a mix of researcher-found images and ones supplied by the participants (Baxter et al, 2015; Bloice et al, 2017). Certainly, Baxter et al found the loose photo method to 'induce a freer narrative', but on a practical level, found it was difficult to capture the responses when multiple conversations were happening about different photos simultaneously (Baxter et al, 2015).

In the earlier studies by the RGU research team in the social and cultural role of the main street (Baxter et al 2015) and of remote and peripheral airports (Bloice et al 2017), an

attempt was made to merge existing images to better compare past and present. For example, an old black and white image with a more modern image of the same scene. This method of 'rephotography' or 'repeat photography' "act as an eye-catching talking point for research participants" (Baxter et al 2015). Not only this but it allows the participants to appreciate the ways in which their community had changed (if at all) over the years.

Klett states that:

"Rephotographs rely on a visual language that is almost universal. The ability to point out and compare differences between photographs spans a very wide range of viewer interests and levels of experience. However, the ability to interpret these differences is not universal; because when two photographs, an original and a rephotograph, are paired together the combination may illustrate change and the passage of time, but neither image can explain the events that led to that change. Rephotographs have been used by researchers across many fields as tools, documents, and objects; how rephotographs are made varies among disciplines, just as what researchers expect from them ranges from documentation of data to poetic expression. Rephotographs can support both empirical and theoretical work; they may also become the subjects of research. From the natural sciences to the fine arts, rephotographs can help examine change and document the passage of time, most commonly in landscapes where the original subject of a photograph can be located and the space revisited."

(Klett, 2011, p114)

While historical photographs (whether as part of rephotography or otherwise) can be used as a method of conjuring up the distant (or not so distant) past, Margolis and Rowe argue that:

"In a real sense all photographs are historical; they are two-dimensional representation of scenes captured with lenses, and frozen in a fraction of a second. From the instant of exposure, the photograph recedes into the distance of time."

(Margolis and Rowe, 2011, p337)

Other still image elicitation methods involve use of, for example: 'graphic elicitation' which is usually a diagram or mapping exercise (Prosser and Loxley, 2008), but photo elicitation methods appear to be the dominant form. See Klett (2011) and Reiger (2011) in Margolis and Pauwels (2011) for a fuller description of the role of rephotography, and Prosser and Loxley (2008, p19) for more about the historical development of photo elicitation as a visual method.

## 2.5 USING MOVING IMAGES

This section deals with the use of moving images in research, primarily film. As mentioned in previous sections, there has been a focus on the photograph in visual studies. Such 'still images' have been used since the invention of photography, however, Pink argues that 'still images are anything but:

“One of the first ideas invoked by the idea that images move is the distinction between the 'still' and the 'moving' image, which is essentially concerned with the content of images and the use of different media. Instead, my interest is in understanding how images, as products of and participants in wider environments, are both produced and consumed in movement.” (Pink, 2011b, p6)

Use of video in visual studies has been described as 'not common' outside of anthropological film-making, but with emergence of new technologies, including digital video cameras, and easily accessible software for editing, the use of the moving image in research is becoming more accepted and 'gaining converts' (Prosser and Loxley, 2008). Using video is, as a technique “more cumbersome and less easy to manipulate and less normalised as an activity than photographs but there is growing interest among anthropologists” (Prosser and Loxley, 2008, p23). Prosser and Loxley also note the rise in use of video by researchers in 'performance and arts-based research' and use of video research in the 'learning sciences' (Prosser and Loxley, 2008, p23).

This disparity between the visual mediums – that photography is preferred in other fields, yet anthropological studies usually involve film – is discussed by Ruby in his critical review of visual anthropology:

“Unlike film or video, anthropologists have not shown much interest in using photography as a technique for communicating their research... For reasons that are not clear to me sociologists are much more interested in photographic ethnography, and therefore visual sociologists are much more commonly photographers”

(Ruby, 2006, p163)

As in the discussions around the 'reality' of the photograph, questions around what constitutes 'reality' on film and whether it is a 'true story' are much debated. Harper describes empirical visual research methods and visual ethnography as simply a 'realist's tale' (Harper, 1998; Prosser and Loxley, 2008). Prosser and Loxley acknowledge that early visual research did not engage with this debate, but that there has been, over the years, a gradual shift towards considering films within their particular contexts and reflects on the importance of researcher and participant interpretations of the film:

“the belief that...documentary film 'captured' reality was typical and ubiquitous throughout early visual research. During this time, the analytical focus was on the internal narrative or story (essentially a researcher-centred understanding of the content of an image). Latterly, attention of visual researchers has broadened out to include the external narrative i.e. the

broader social context in which imagery are created and constructed by combining expert (researcher) and lay (participant) insights and meanings.”

(Prosser and Loxley, 2008, p10)

Ruby has also written on the topic of the nature of film, stating that video recordings should be subject to the same level of scrutiny as text-based data, and that it is dangerous to disregard that films used in research couldn't have the same biases as textual data:

“It is the unspoken and untheorized assumptions about the nature of film that trouble me. If film by its nature cannot convey complex ideas in a manner similar to, but different from, the written word, then its role within anthropology is indeed limited to an audiovisual aid, no more important than a textbook”

(Ruby, 2006, p160)

As in the ethical discussions around use of researcher-created photographs, researcher-created film has come under criticism:

“The use of researcher-created photographs by ethnographers and sociologists in particular was criticised by protagonists of cultural studies and critical theory... Film and video taken by anthropologists and used as evidence was also viewed as flawed.”

(Prosser and Loxley, 2008, p15)

However, there is an acknowledgement that film can be used to support the accuracy and validity of research findings. Both positivist and interpretative forms of research data (Prosser and Loxley, 2008) can be produced, especially given the technological advances of the digital age.

Additionally, using film as an elicitation tool can be as useful for gathering rich data as photo elicitation:

“Video elicitation sessions like retrospective analyses of behavior... and interviewing supported by video recordings... are methods that enhance the accuracy of self-reports.”

(Alexander et al 2016, p3)

Indeed, Kokk and Jonsson found that video recordings were useful particularly when studying historical events such as organisational and industrial change: “Our main argument is that video recordings create analytical spaces that outlive particular events, and which can be used to identify and interpret episodes of historical importance.” (Kokk and Jonsson 2013, p174). However, they also found that: “how we experience time depends on the way we aggregate our experiences into episodes so that we can reflect upon them and give them meaning” (Kokk and Jonsson 2013, p182), and highlight the particular benefits of conducting longitudinal research using visual methods such as the ‘long loop’ method they describe, which returns to older interview clips to gain new insight. This might be particularly helpful in airport research to analyse how stakeholder attitudes shift over time, for example.

Particularly where the moving or video images are produced used a participatory research method, this is often said to have a power balancing and 'bridging' effect. The power balance between researcher and participant, has a long history of debate, but essentially, modern trends in research seek to do research 'with' participants rather than 'on' subjects. Especially where the research topic is contentious or taboo to speak of with certain people, the power of the visual to level out the power balance by literally allowing someone to 'see through another person's eyes' is noted. As Chalfen summarises:

"Over the past few decades and across the world, a range of 'participatory visual methods' has caught the imagination of people seeking to investigate social conditions, lived experience, subjective viewpoints and, in some cases, interventions for social action. By using the term 'participatory visual methods,' attention is drawn to collaborations of participants (sometimes research 'subjects') and researchers in the production of pictorial expression of personal thoughts and life circumstances. Though seldom defined or codified, the process often brings together an unfamiliar 'outside' person(s) and an individual or group of 'inside' people to explore a phenomenon by collaborating on the production of visual (often audio-visual) documentation. The design of these collaborations between 'ordinary people' and 'outsiders' (for example, researchers, educators, artists, professional photographers) may vary widely. However, there is a general sense that ordinary people will welcome the opportunity to express themselves by collaborating in the production of visual data for exhibition, new observation and comment, or academic study."

(Chalfen, 2011, p186)

This participatory potential of visual research has been gaining attention, especially where the film can be viewed by communities:

"upon viewing a video created by other members of the community, [they] commented: '...it is easy to understand a thing if it means you sit with him/her and talk about the matter... rather than standing in front of them.' This equalling of power relations creates a space for dynamic interaction around topics that have often been kept silent"

(Mitchell and de Lange, 2011, p171)

For a fuller discussion of how visual methodology can be employed for community stakeholder research, see section 2.7.

## 2.6 USING 3D IMAGES

In contrast to the volume of academic writing on still and moving images and their applications in research, there is a relatively small amount of discussion of the role of 3D images in sociological research. There is a recognition that visual research is largely concerned with camera-based materials, but that there is a growing acceptance towards objects and model-building methods, looking beyond the use of images alone (Hinthorne & Simpson Reeves, 2015).

Perhaps as digital technologies advance, we will see a growth in this type of visual medium being used. Certainly, where the topic of the research is one that cannot be expressed through use of found visuals, or through any of the previously mentioned participatory image generating research methods, the potential for 3D images is great. It may allow researchers and participants to visualise places which are no longer there, or perhaps glimpse a representation of how a place may change in the future. In other words there is “potential for 3D images to allow participants to imagine the abstract, for example a potential future” (Hinthorne & Simpson Reeves, 2015, p171).

Additionally, where the research is focused on place, and the communities within that place, 3D imaging tools can not only help participants to better see what is not there in reality, but can also serve as powerful data collection tools in their own right about ‘everyday knowledge of social places’ (Dennis et al , 2009). Dennis et al refer to a specific type of 3D image use in research, where ‘participatory photo mapping’ or ‘PPM’ is used to produce a picture of how people move about their neighbourhoods, in this example, to inform health care:

“PPM is presented here as an integrated suite of digital tools, narrative interviews and participatory research protocols that enable transdisciplinary community-based health partnerships to produce shared practical knowledge. PPM is built upon successful techniques developed to facilitate public participation in researching, planning and implementing strategies to improve wellbeing. These techniques include participatory photography, photo elicitation interviews and public participation geographic information systems (PPGIS). PPM combines these strategies through analysis of a comprehensive set of images, narratives and other qualitative data produced by participating community residents. Using handheld global positioning system (GPS) units these qualitative data are linked to specific locations. This procedure enables the integration of experiential data with spatial data (e.g., crime, housing or transportation data) by incorporating both into a geographic information system (GIS) for mapping and analysis. The GIS becomes the framework for displaying, analyzing and tracking neighborhood-level information. Consequently, collecting data from the widest variety of sources, using the widest variety of methods, produces the most complete picture of people’s experience of health and place” (Dennis et al, 2009, p467)

Use of 3D imagery in research of this type is a recognition that peoples' knowledge of their own communities and social spaces is difficult to communicate in a more conventional linear narrative. In other words:

“people's lived experiences consist of cognition of location, remembered images and storied accounts of events. Hence, their everyday knowledge of health and place is typically multi-faceted and often tacit.”

(Dennis et al, 2009, p468)

## 2.7 VISUAL METHODOLOGIES FOR COMMUNITY STAKEHOLDER RESEARCH

As has been discussed in previous sections, visual methodologies can help researchers connect to their participants. They can often act as 'elicitation devices' to aid participants' recollection (Clark, 2017). Certainly where the research involves community engagement, it has been discussed that employing visual methodology would bring better participant-researcher relations and lead to richer data.

Additionally, if the visual method is of a participatory nature, the data may more accurately resemble the reality of the participants' social and cultural sphere if the starting point is allowing participants' to think about their communities in ways that are meaningful to them (Clark, 2017). For example, participants may work on a 'mapping exercise' together (Clark, 2017) or a 'model building' exercise (Hinthorne and Simpson Reeves, 2015).

Despite this ability of visual methodology to better represent participants' realities, it is still the case that most visual methods are mediated by the researcher in at least some capacity (Clark, 2017). In the example of the SPARA 2020 photo elicitation, the photos were chosen by researchers, questions prompted by researchers, and the resulting data analysed and presented by the researchers (Bloice, 2017). As such, visual methodologies aren't more representative of reality than other data collection methods, more, that they are a "useful lens through which to view the world" (Clark, 2017, p24).

Prosser and Loxley (2008, p17) also note the difference between "researching 'on' respondents and hence seeing them as the 'other', or closer to collaborating 'with' respondents and seeing them as experts in their own lives". Certain types of visual research lend themselves to type of participant role, or the other. However, they add that often it doesn't necessarily need to be either one or the other, that the participants can be included and the power balance adjusted along a continuum of 'embeddedness' (p18).

Hinthorne and Simpson Reeves (2015) are also concerned with authentic voice and assert that allowing participants' own photographs or visuals, allows more authority and ownership of the conversation and discussion topic. It should be mentioned that the participants' own memories and recollections of the airports in Bloice et al 2017 were sought, and as such, participants had ownership of these memories while the photos were used to jog memories and prompt discussions. It would have been interesting to conduct a more community-based research investigation into the social and cultural role of the local airports by asking the community stakeholders to put together a series of images (whether a photo exhibition or a film or a 3D representation) representing their thoughts on this.

Interestingly, when we consider community stakeholder engagement (such as the earlier SPARA 2020 research project) visual methods applied to investigations of community come across a number of issues, the main one being that the notion of 'community' as a chaotic concept (Clark, 2017). As such, there are different dimensions and layers of complexity in any community which can be uncovered by different methods (Clark, 2017). When examining the role of a peripheral and remote airports within that community, for example,

it can therefore be expected that combining methods and adoption of a range of methods of community stakeholder engagement and consultation would construct a 'fuller picture'.

Additionally, use of visual methods will help to overcome issues of participants' forgetting, misremembering or omitting details during data collection. To give an example from the SPARA 2020 photo elicitation research, interviews conducted at the exhibition wall often seemed to jog participants' memories and sometimes, in cases where the photos predated their own relationship with the airport, helped them to reflect on 'how things are now' in comparison to 'how things were' as represented in the archival photos (Bloice et al, 2017). There is also something to be said for the indicative value of fieldwork, how 'being there' helped researchers to make more sense of the role of the airport in the community with the terminal and surroundings themselves acting as a sort of elicitation device (Clark, 2017).

As mentioned, the trend in visual anthropology for what is termed rephotography or 'repeat photography' (Smith, 2007), where images of the same thing are compared through the ages has been important for community based research and can help to prompt memories of a time in the past and sense of place. There was an element of this in both the main street research by Baxter et al (2015) and the remote and peripheral airport research by Bloice et al (2017). Blaikie (2006) asserts that memories are important to sociological research as they are critical building blocks of identity and community. Blaikie argues that photographs particularly matter because they are the 'custodians of memory' and:

“without the visual record of the everyday, there are only personal testimonies or constructed histories. Or, rather, images can be used to symbolize the past. Thus, photographs collude with memory in identifying a relationship between childhood, values and place, so that to glimpse 'the way we were' is simultaneously to evoke both recognition and loss, albeit the half-known and partially grasped”

(Blaikie, 2006, p60)

In previous research into the role of the main street, Baxter et al found that use of the photo elicitation approach led to an increased engagement from community members who were reluctant interviewees otherwise (Baxter et al 2015). They suggest that a photograph acts as a sort of neutral third party in the interviewing process and “helps to trigger responses that would have remained unmined using traditional verbal interviewing techniques” (Baxter et al 2015 p16). Certainly, they found a marked difference in recruiting participants using the photo elicitation method for the main street research, versus recruiting participants for research into car use in the same community using a more traditional interview approach (Baxter et al 2015).

Ireland and Ellis (2005) claimed that old black and white photos in particular of the local community can “stimulate the conscience collective among indigenous peoples” and certainly this was found to be the case in both the main street study and the latter remote and peripheral airport study (Baxter et al 2015; Bloice et al 2017). Therefore despite the

ethical challenges of using images featuring recognisable faces, their inclusion “can add significantly and positively to participants’ intellectual and emotional engagement with photo elicitation research” (Baxter et al 2015 p27).

Coemans, S., & Hannes, K. (2017) note that “one of the most common arguments for using arts-based methods in community-based inquiry is its potential to ‘give’ voice and to empower more ‘vulnerable’ participants and communities” (p45). They question whether these methods really do allow authentic voice (through photovoice studies for example). They point out that most of these voices are mediated and interpreted (whether through translators, facilitators or researchers) and the dissemination is simulated content. Similar concerns must be held for the photo elicitation technique, for example. Researchers often choose the photos used (or not used), and lead the discussions, with the resultant data analysed and written up by the researchers. While there are examples of participants bringing their own photos and supplying their own objects such as was the case in the SPARA funded research conducted prior to this report (see Bloice et.al 2017).

Similarly, what is sometimes called ‘place based archive film’ can connect communities to their past and encourage discussion about place, daily life and change. A practical example of this would be the Made in My Toun project, which is part of Britain on Film, a major project from the BFI National Archive, Regional and National Archives and rights holders from across the UK that reveals new and unseen stories of local lives through the history of film (Made in My Toun, 2016). The project toured the country, showing locals archival film footage of their own local area, and then hosted a discussion afterwards about how things were and how things are now.

However, memory can be seen as a very personal construct. As mentioned in previous sections, one person’s interpretation of a photograph can be completely different from another, as can a person’s memory. Where this gets particularly interesting, is in discussions around collective memory, shared experiences and the history of a community as remembered by its members. Blaikie dealt with this issue in his examination of photos which depicted a ‘forgotten’ community of the past and recognised that “there is also a tension between individual and collective accounts. In one sense memories, unlike history, are personal and unmediated. But personal recollections can only be articulated through language, signs and conventions” and later asserts that in once sense ‘all memory is social memory’ (Blaikie, 2006, p59).

On the topic of gather community views and representations of what it’s like to like in that community, Kolb notes that:

“The photo interview has proven particularly useful for sustainability and environmental studies in which eliciting community points of view is crucial to the research effort... The photo interview method invites participants to answer a research question by taking photos and explaining their photos to the researcher. Once the photo interview is completed, the

photos and interview text are available as data for further research and sociological interpretation using different methods of scientific analysis”.

(Kolb, 2008)

Collier and Collier were of the view that:

“a variety of reliable evidence can be read directly from photographs of social and ceremonial activity, for in them is reflected complex dimensions of social structure, cultural identity, interpersonal relationships, and psychological expression. Pictures of people mingling offer us opportunities for measuring, qualifying and comparing, but there measurements can go much further and help define the very patterns of peoples’ lives and culture.”

(Collier and Collier, 1986, p77)

This view certainly seems to have persisted through to today’s modern visual studies, and perhaps the effect has been enhanced by our living in a ‘visual age’. In other words, the case for including the visual in research about our daily lives is strong, and the visual is a powerful research tool as:

“most of us live in a very visual world. If more and more communication is happening through visual media, the argument goes, then academic research also needs to start communicating visually”.

(Rose, 2012, p331)

One example of how visual methods can be useful in community stakeholder engagement is how the use of the visual can be ‘boundary crossing’. Liebenberg (2009, p1) found that employment of visual methodology helped to form a bridge between participant and researcher and that the method leads to “space created for participants to reflect and communicate on their lives as well as the shift of focus possible when incorporating visual methods in research designs. Specifically, participants are invited to step back from their lives and reflect on their context and experiences”. She notes that research itself is a boundary making exercise with the researcher often in a privileged position who may impose their research ideals on their research subjects who are regarded as ‘Others’; those researched communities who are not of the norm (Liebenberg, 2009). Especially where participants have produced their own images, “an opportunity is established for researchers to literally see what participants are talking about” (Liebenberg, 2009, p4).

Conversely, we have the issue of a researcher going into a community they are not familiar with, perhaps not speaking the same language or dialect and there being a distance between the research and participant because in this scenario, the researcher is viewed as an outsider. Liebenberg argues, that “a reflective method such as elicitation, where researcher and participant discuss images created by participants, situates participants as authorities on their lives, better controlling research content” (Liebenberg, 2009, p4). As

such, visual methods are boundary crossing, allowing better interaction and overcoming some of the pitfalls that can mar the researcher-participant dynamic. In other words, there is a suggested “value of incorporating visual methods into research with marginalized groups, where communication may be problematic, increasing the possibility of cultural misunderstandings and misrepresentations” (Liebenberg, 2009, p6).

Benson and Cox suggest that not only can visual research help to bridge the research-participant gap, but that it can more effectively communicate with the wider world if the outputs of visual research are in a visual format. They argue that this type of research dissemination can help to enhance public awareness and maybe even ‘impact on policy’ (Benson and Cox, 2014)

In advocating for the use of visual methods in community based research, said:

“Experiences and meanings become tangible through visual representation and may be understood in ways that other conventional forms of communication may not necessarily allow. In this way, images may facilitate participant articulation of lived realities in a manner that brings a focus to research results better aligned with participants’ lives. Similarly, through use of visual material, researchers may discover and demonstrate components of community lives that may be subtle or easily overlooked.”

(Liebenberg, 2009, p5)

As mentioned, there is an important element of participation, if not co-creation in visual studies of this type where the methodology itself helps to connect researcher and participant and/or give voice to those who perhaps could not communicate using traditional verbal and written means. This dual benefit to research (both in the engaging of participants and the communicating of results) is summarised by Benson and Cox:

“Visual methods are seen as engaging and accessible ways to undertake and disseminate research; they aim to actively engage communities in the research process, and explain the results of research to the public better. They may help to gather data from difficult to reach communities, and their constructive nature deepens the interviewee's engagement with the themes and allows them to express what might be hard to articulate in words”

(Benson and Cox, 2014)

In her argument for the inclusion of images as prompts, Liebenberg asserts that: “images can serve as signifiers of culture, highlighting values and expectations of individuals as well as groups. Research incorporating images can therefore provide important information regarding the cultural reality of the community studied” (Liebenberg, 2009, p4). There are questions over the validity of research into communities and attempts to define and study communities in linguistic terms can be aided by the visual and that, combined with other qualitative methods, the “visual transcends pre-conceived notions of life, reflecting greater representation and contextual knowledge” (Liebenberg, 2009, p4)

Pink describes a move towards a theoretical conceptualisation of 'place' as an event, rather than as a 'fixed locality (2011). Taking this 'place-as-event' concept, it means that places are amorphous, and "continuously changing through the movement of its components, at different rates and in different ways" (Pink, 2011a, p93). This has interesting implications for how still images in particular are incorporated into research on places, if this conceptualisation is accepted as "the taking, manipulation and viewing of amateur photographs becomes part of this perceptual and experiential activity" and "an understanding of how practices are related to the event of place is required" (Pink, 2011a, p93).

In a further examination of the role of visual and how it can reflect constructs of place, Pink also acknowledges "the multisensoriality of images, locate the production and consumption of images as happening in movement, and consider them as components of configurations of place" (Pink, 2011b, p4). It is beyond the scope of this report to explore notions of the airport as a place, and to examine how visual methodology can help to describe that place, but the authors are planning a further output which will explore these ideas in greater detail. In particular, the current authors would like to explore in more detail the notion that airports are regarded as 'non-places', and would look to discuss the implications of such a designation on the potential for using the type of visual methodologies described in this paper.

## 2.8 VISUAL METHODS IN AIRPORT AND TRANSPORT RESEARCH

Finally in this literature review, we arrive at an overview of how visual methods have been used in airport and transport research. There has been very little published on the topic of visual sociology and using visual methods in an airport context specifically. There are two potential reasons for this: the first being that often an airport is not generally regarded as having an impactful social and cultural role; secondly, as noted in previous sections, visual methods, while gaining popularity, are still not widely used. Certainly, when remote and peripheral airports were examined by the current authors, they were found to have a strong social and cultural role in the communities they serve (Bloice et al 2017), but the majority of other research into airports has focussed on large, international airports and has neglected the social and cultural roles.

A complementary paper examining the social impact of airports has been produced by the present authors where it was noted that “relatively little research has been conducted specifically into the socio-cultural impact of airports and air travel in remote, peripheral areas” (Baxter et al 2018, p27). In the social impact paper, the present authors quote from Jones and Lucas’ examination of the social consequences of transport decision-making, who state that that “the social dimension appears to be the ‘poor relation’ in transport research, policy and practice”, arguing that this has much to do with its “limited recognition and poor articulation” (Jones & Lucas, 2012, p4).

On the topic of visual research of airports which has a socio-cultural leaning, there are some examples of use of images particularly in: helping to understand how certain groups experience the airport environment (Staller, 2014); photo interviewing to assess participant motivations and justifications for air travel (Font and Hindley, 2017); analysis of power of images to communicate air travel strandedness and mobility (Birtchnell and Buscher 2011); changing perceptions by analysing how airports look from the air and in their surrounding landscapes through aerial photography (Duempelmann 2010); and the airport experience and visual perception of the cultural identity of the destination (Wattanacharoensil et al 2016 and similarly, airport design and passenger experience (Harrison, 2015) and changing ‘airport socialities’ generated by the redesign of airport terminals (Elliott and Radford 2015).

Additionally, there has been some very recent work on social media image sharing, how participants use images on social media posts geotagged at airport locations to convey identity as a world traveller (Blackwood, 2018). There have also been studies of the visual culture within airport terminals (Wang 2016) or the ‘visual theatre’ of flight itself (Adey 2008b).

There are some examples of 3D visualisations being used in socio-cultural airport research, mostly to help communities better understand the effects of change. For example Roddy produced 3D visualisations to help participants better understand effects or changes related to levels of airport noise (Roddy, 2015); and Mulder employed 3D visualisations to help stakeholders understand expansion plans (Mulder et al 2007); and media coverage analysis

and image mapping for reality mapping of controversial developments (such as airport expansions) (Yaneva, 2011).

In transport and tourism research more widely, visual methodologies have been used in a scattering of studies. Including: photo interviewing to understand traveller experience (Hung, 2018); asking commuters to take pictures of their commute (Lyons & Chatterjee 2008) and using pictures to discuss movements between work and home (Shortt & Warren, 2017).

On the topic of visual studies of the built environment and of places and communities, Forkenbrock et al note that:

“Going back to the 1960s, some intriguing work has been carried out to better define how people perceive cities and districts within them. This work is vital to estimating how changes in the built environment would affect peoples’ satisfaction with it. More recent work has focused on computer simulations, photomontage techniques, and other visual experiments to provide residents with a better sense of what the visual effect would be if a project were to be undertaken.”

(Forkenbrock et al, 2001, p39)

Other examples of visual research in the field of transport and built environment include a number of those that ask participants to create visual representations of travel within the built environment: for travel to school (Fusco et al 2012; Murray 2009); to examine the effect of transportation projects on community cohesion (Forkenbrock et al 2001); human visual interfaces to connect urban information interfaces for travel (Laurini 2007).

There are also those that use visualisation to communicate findings of research into: transport networks (Keim et al 2008); social migration, immigration and mobility (Ball & Gilligan 2010; Blunt 2007; Cresswell & Hoskins 2006); again, travel to school (Murray 2009); movement (of people and vehicles) (Andrienko & Andrienko 2013); mass public transportation systems (Zeng et al 2014); and airspace visualisation for a number of reasons (for example bird collisions near airports Poot et al, 2000; and monitoring air traffic capacity Kellner and Aachen 2009).

Others have focused on the airports as a social or cultural space, or at least as a place in which people move through and inhabit for a time, but haven’t necessarily used visual methods. For example research on: airports as cultural spaces (Kramer 2013); conceptualisations of the airport as either a transitional space or non-place (Coulton 2014); navigation around airports (Cave et al 2014); airports as cultural gateways (Scott-Woods 2011); the airport as a prototype city (Bosma et al 2013); or on movements and mobility (of information, people, baggage and planes) in the airport terminal (Knox et al 2008; Adey, 2008a; Sheller and Ury, 2006). Interestingly, Reeh wrote of the power of image and memories which are tied to ‘crossing thresholds’ on the ways in and out of cities and countries, through train stations and airports (Reeh, 2009) again reiterating the power of

the image when it is tied to a memory, but here considering the airport as a 'non-place' or 'threshold'. Similarly, Roseau examined 'urban imagery' and how airports can be mirrors for contemporary expectations and form part of 'urban narratives' (Roseau 2012).

Finally, there are studies that look at the visual nature of airport work itself, for example: security screening (Parks 2007; McCarley et al 2004). This is termed 'visual security studies' and is hailed as a developing subfield of critical security studies (see Vuori & Saugmann 2018). Or airport tower visual work (Goodwin & Goodwin 1996; Suchman and Trigg 1991). Interestingly, these last two papers also employed a visual methodology by video recording coordination of action between different airport workers and these studies played an important role in the developing field of using video imagery in workplace studies (Schnettler 2013). There are also examples of using photo elicitation methods to study 'mobile workers' who use venues such as airport lounges to conduct meetings (Felstead et al 2004); and mobile video ethnography to document the occupation of commercial floatplane pilots (Vannini 2017).

### 3 DISCUSSION AND CONCLUSIONS

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This report has reviewed the use of visual methodologies more widely and focussed on those which could be employed for both socio-cultural and airport research. It has reviewed the use of still, moving, and 3D images and visualisations and the potential to use these methods to help people remember, connect to, and visualise these social and cultural spaces of the past, present, and future.

It has given examples of where visual research methods have been employed successfully in social and cultural research, and has focused on the implications of this type of research when applied to communities or places.

The current authors would argue that airports, certainly those in the remote and peripheral areas covered by the SPARA2020 project, are socially and culturally important to the communities in which they serve and that they can be seen as a place (or event-place) rather than as simply a 'threshold'. As such, research methods, such as visual methodology, which lend themselves to examinations of community and place may be successfully applied.

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